



Inventors: Thomas L.C. Simpson et al.  
Application No.: 10/749,102  
Confirmation No.: 3166  
Title: System and Method for Notification and Escalation of Medical Data  
Sheet 1 of 59 Sheets

FIG. 1

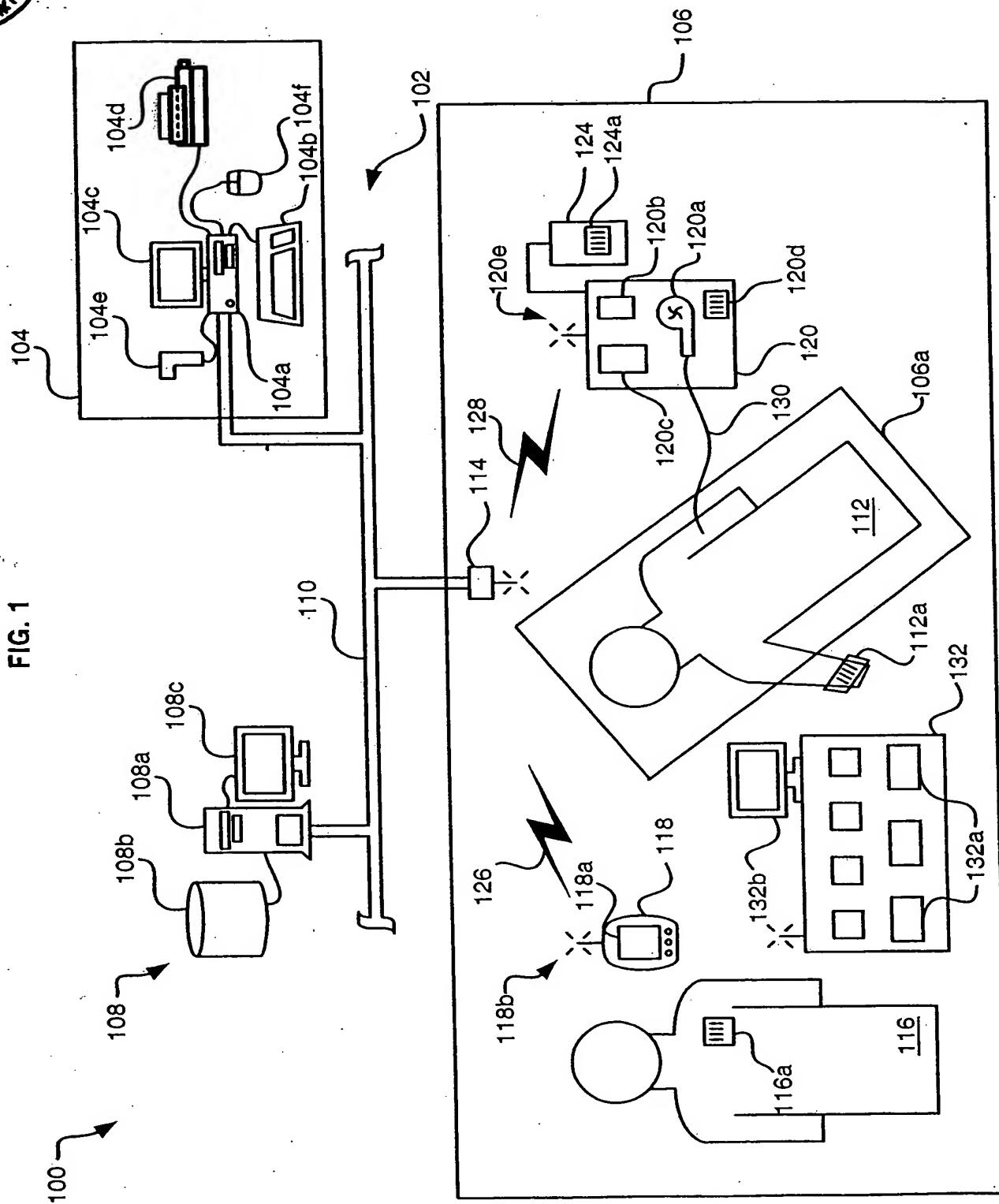
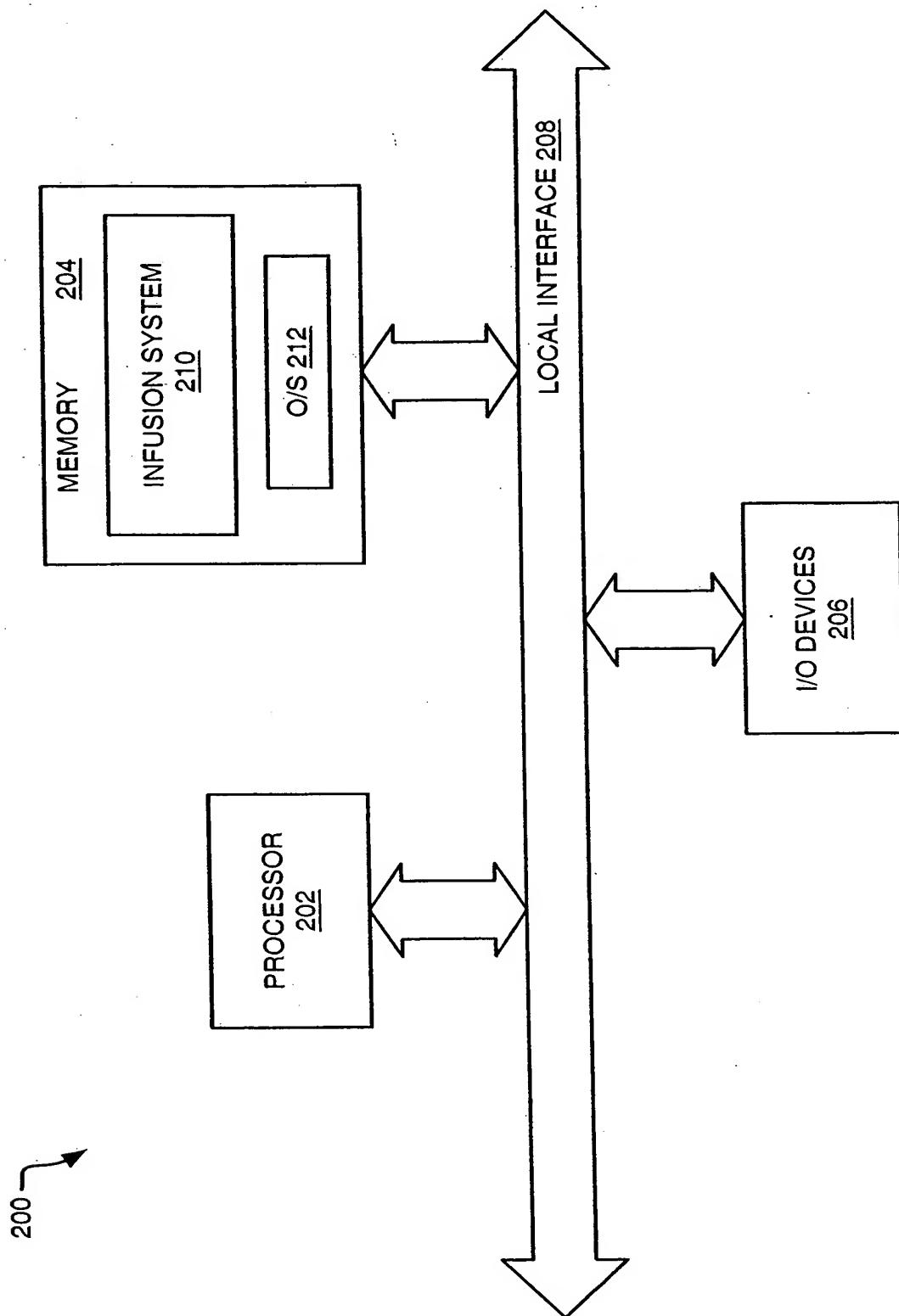


FIG. 2



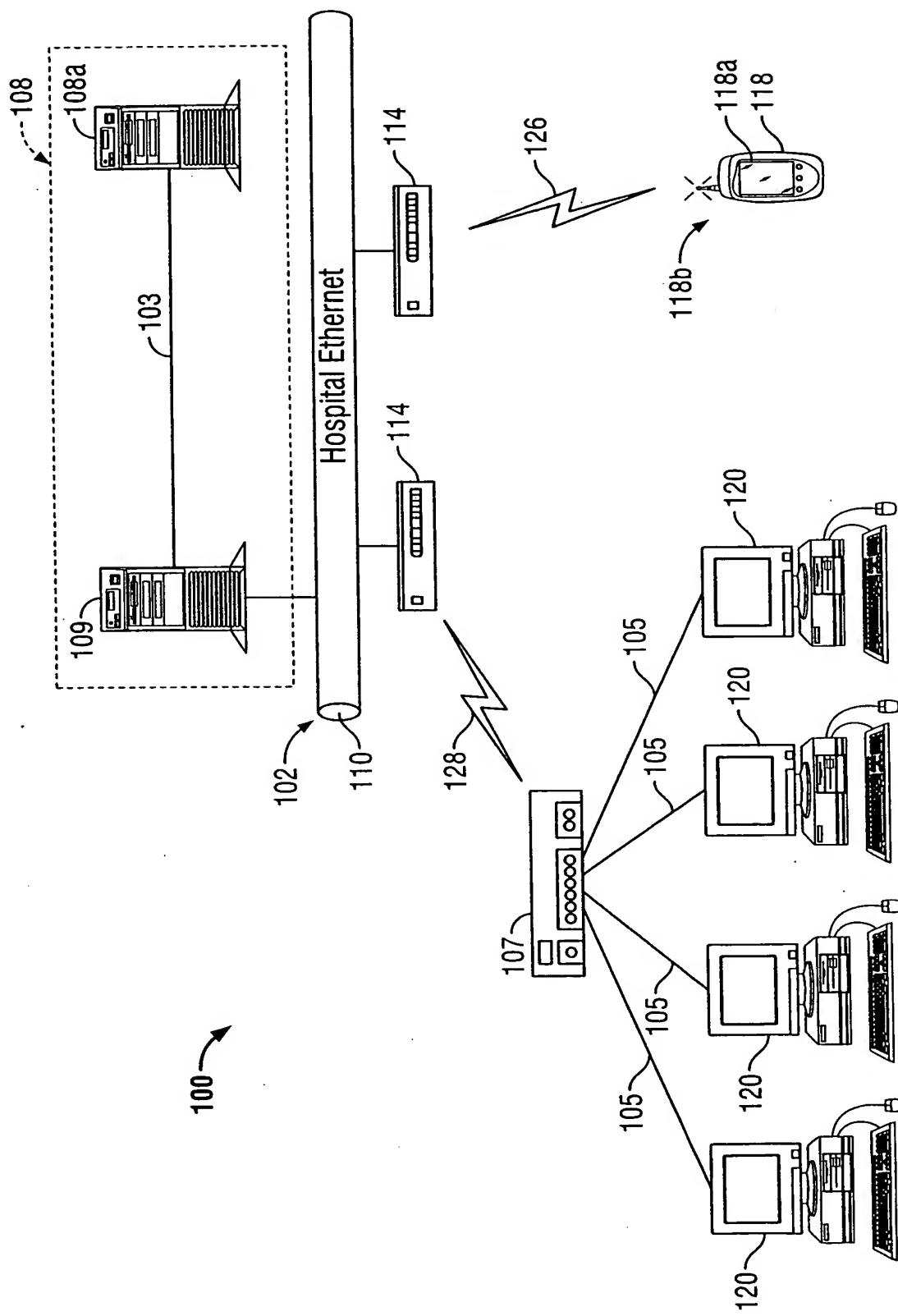
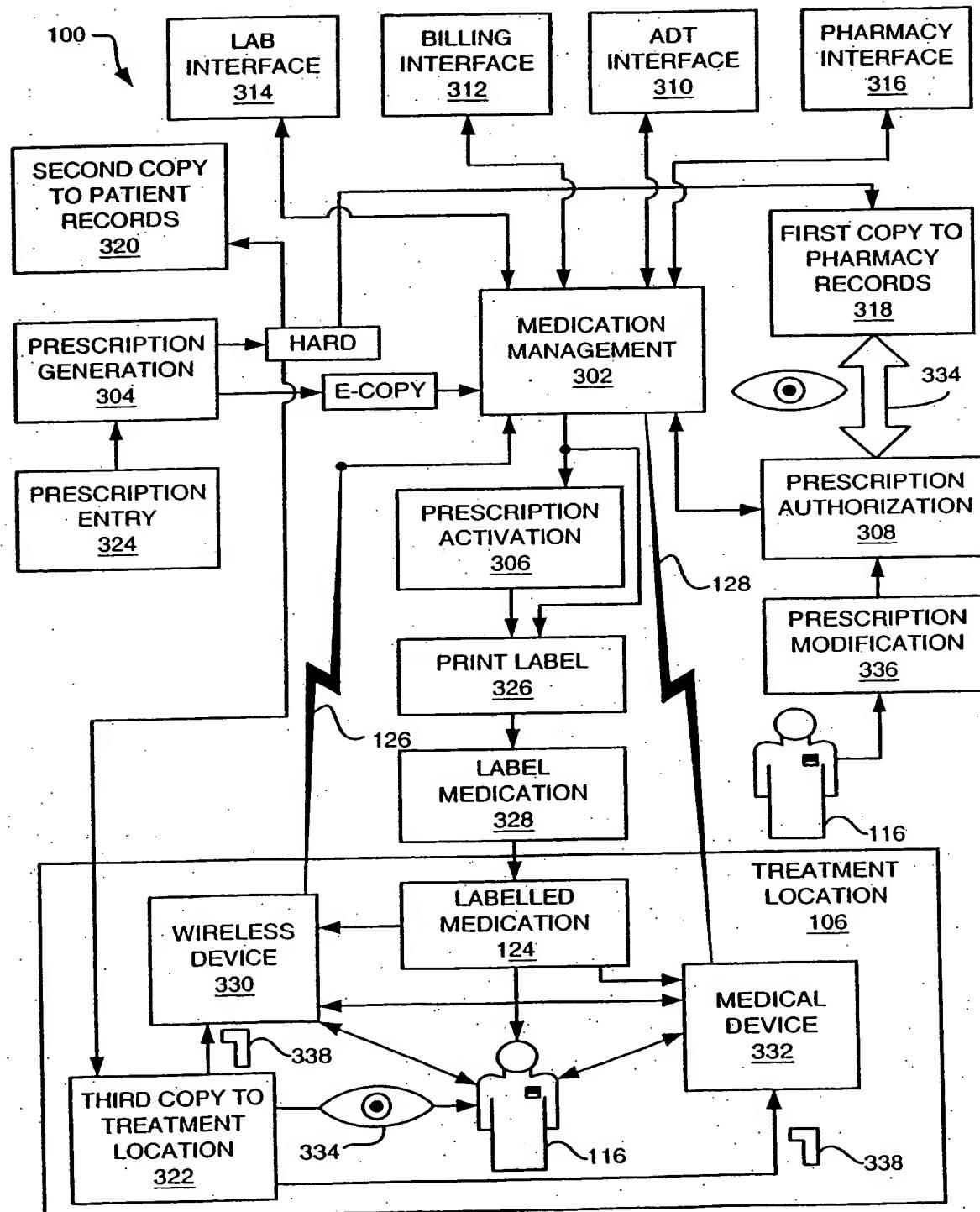


FIG. 3

FIG. 4



**FIG. 5**

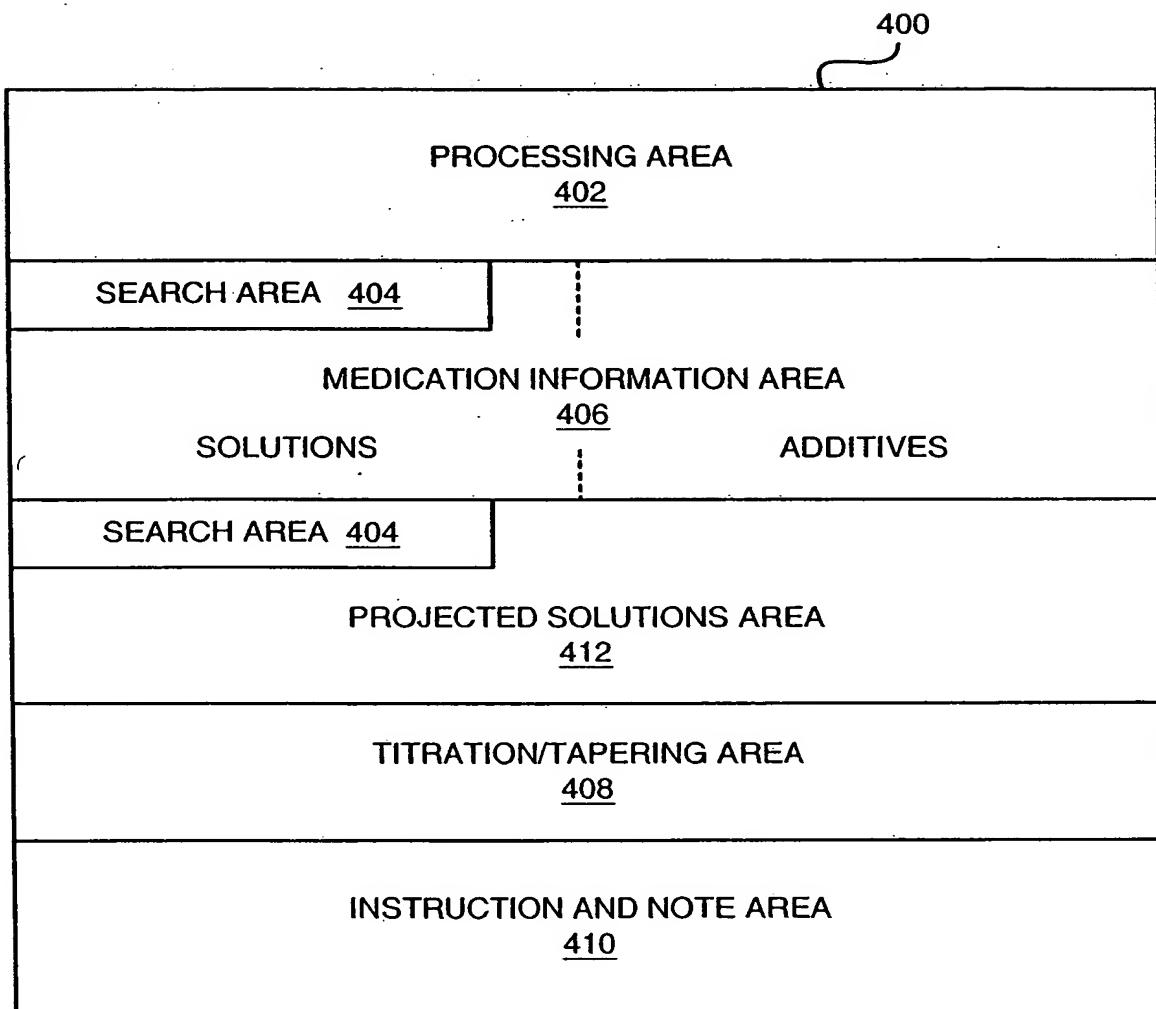


FIG. 6

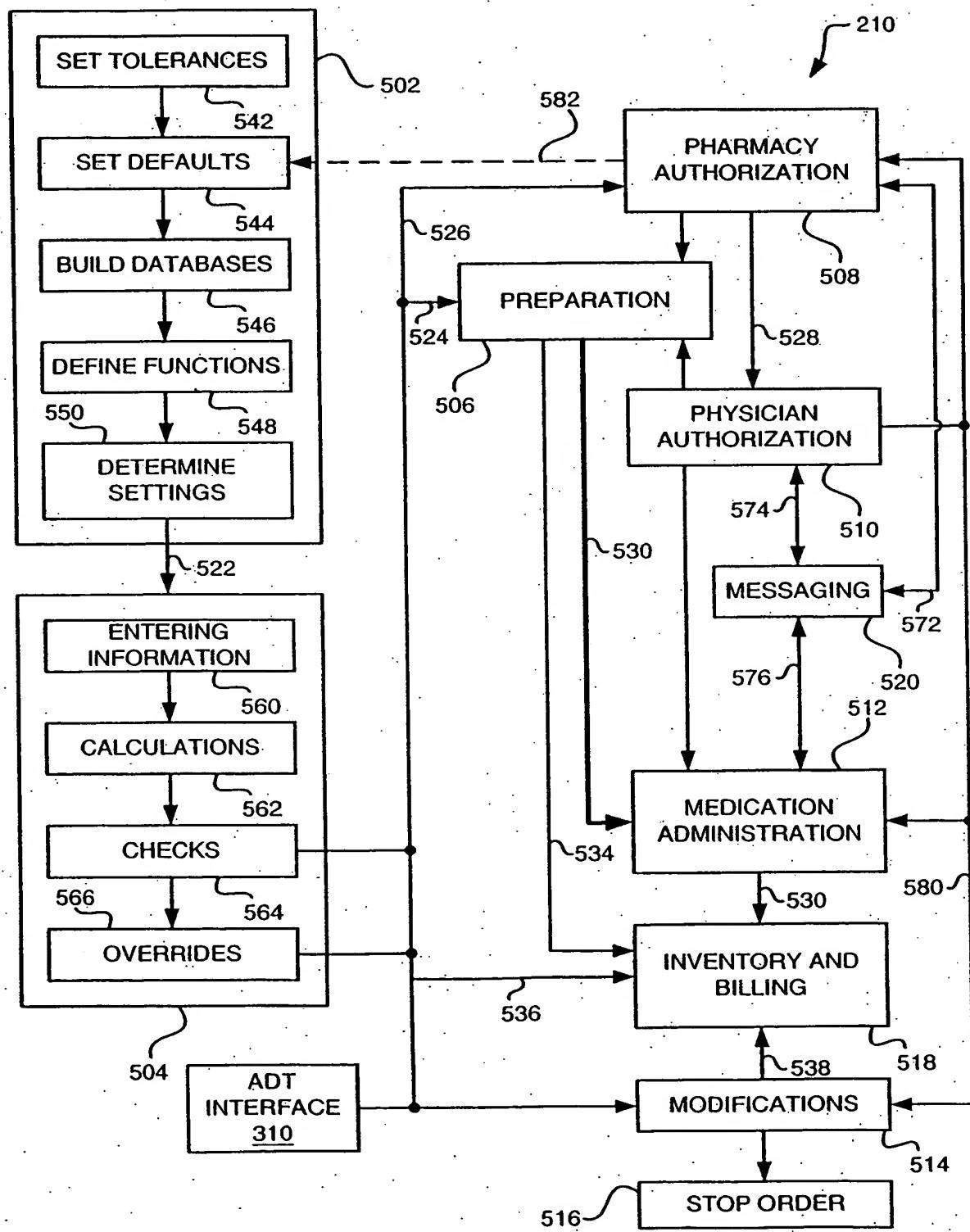


FIG. 7

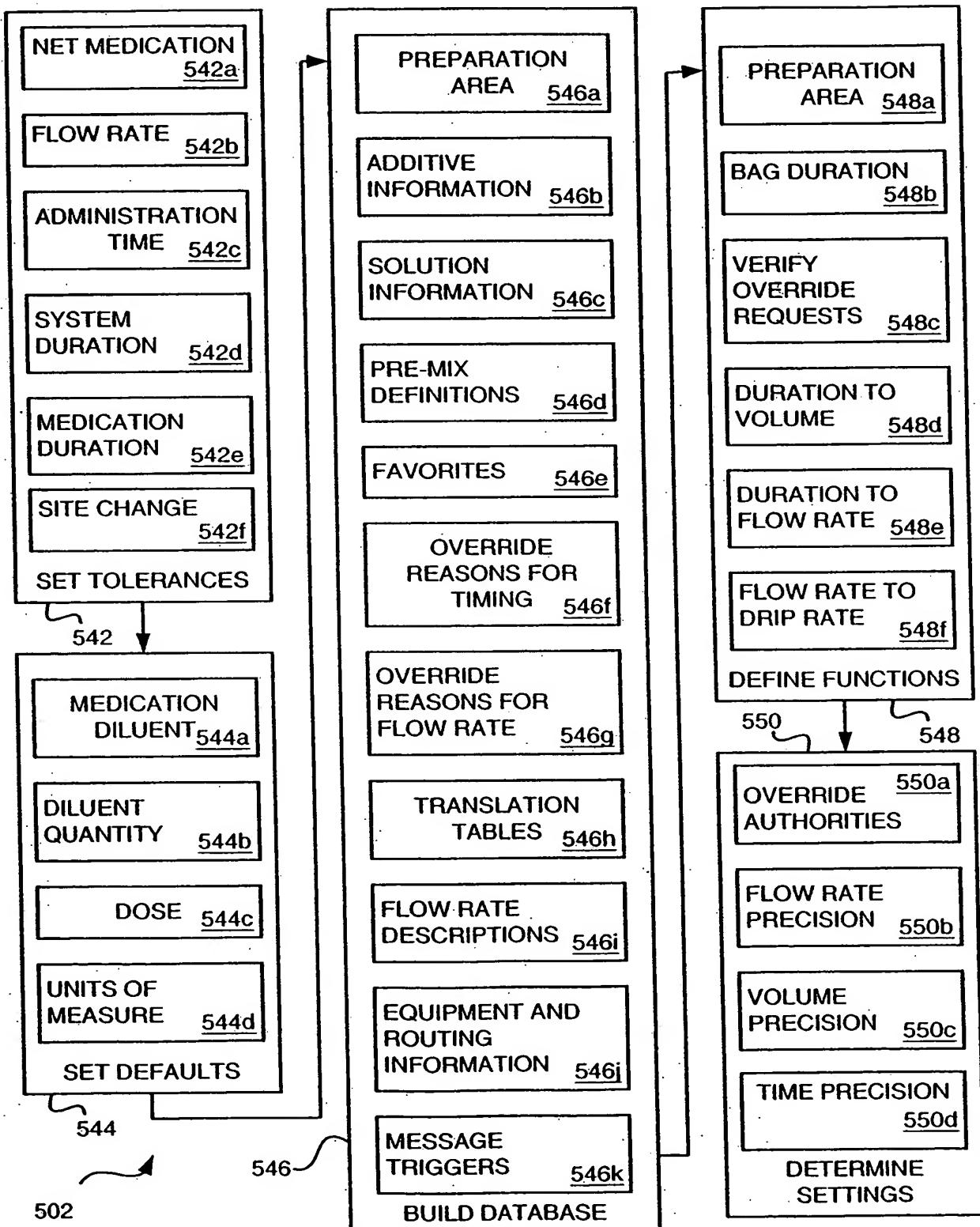


FIG. 8

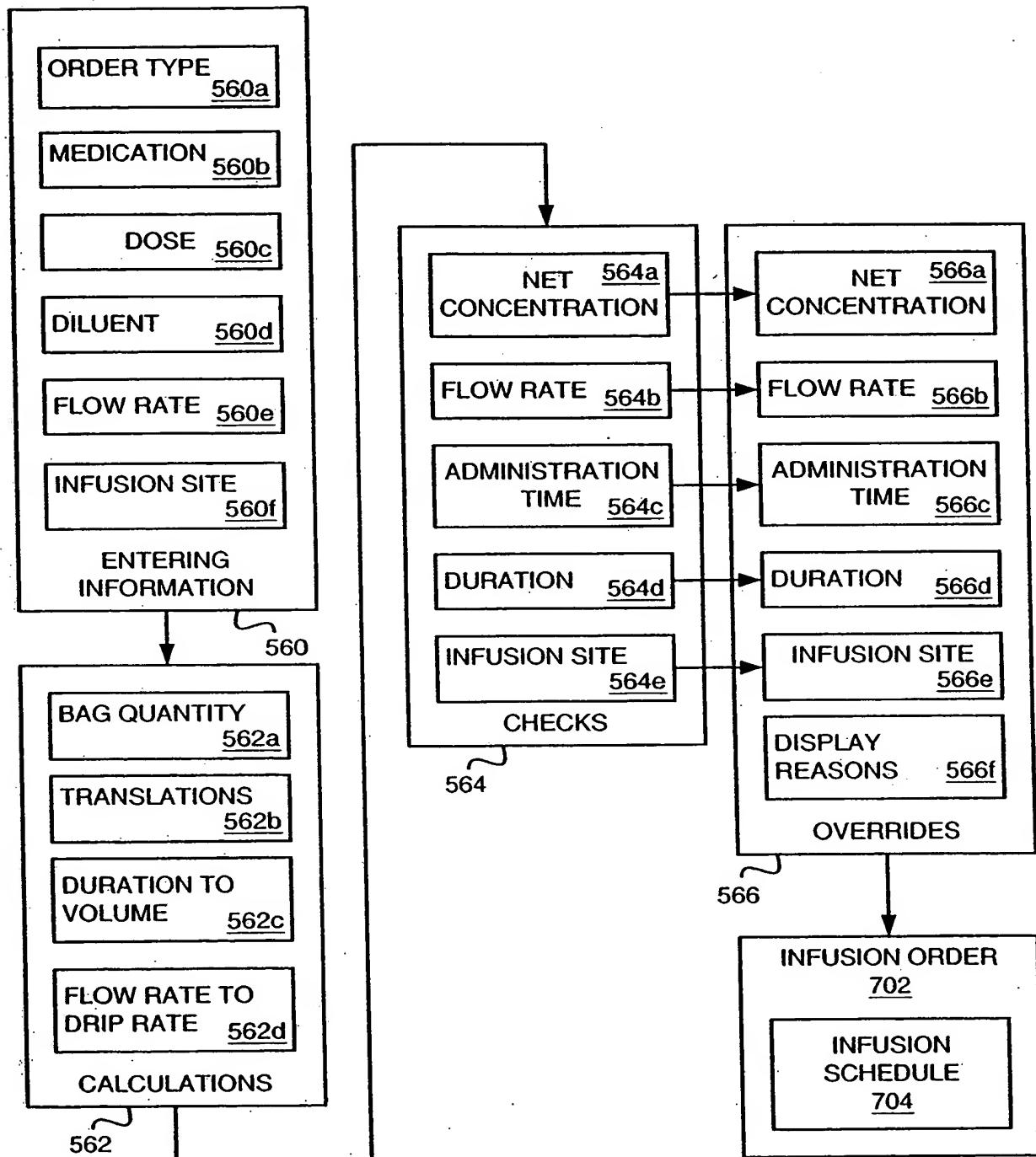


FIG. 9

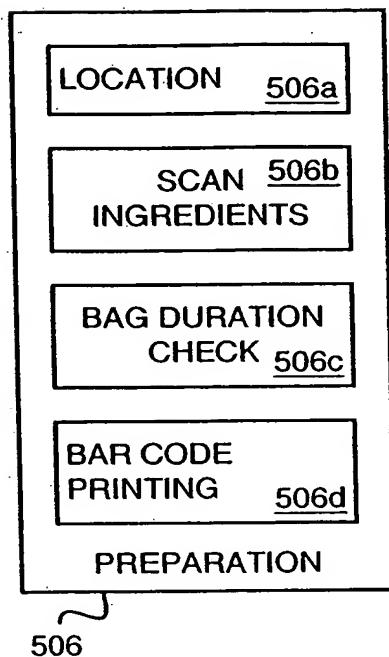
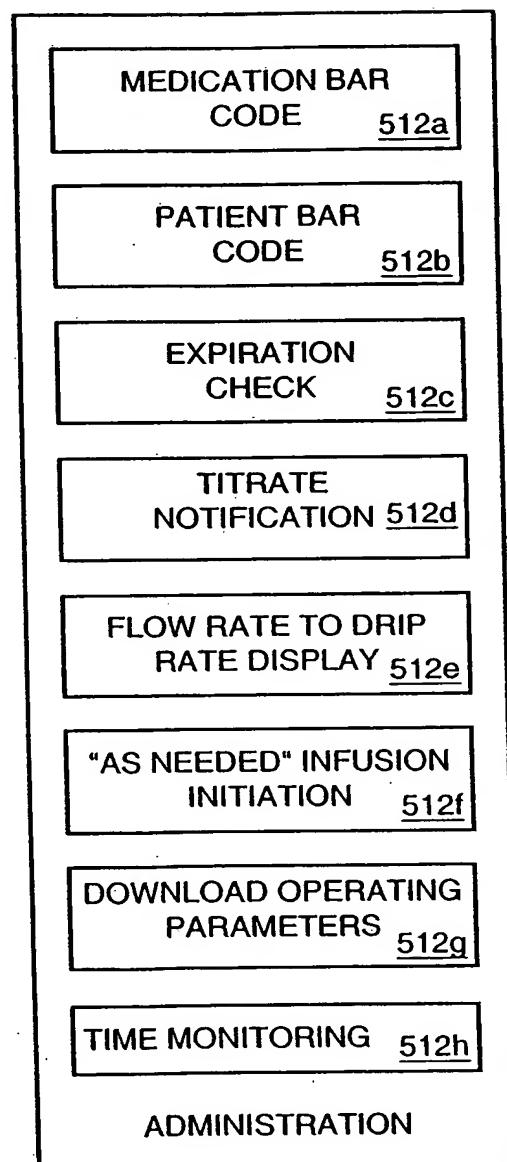


FIG. 10



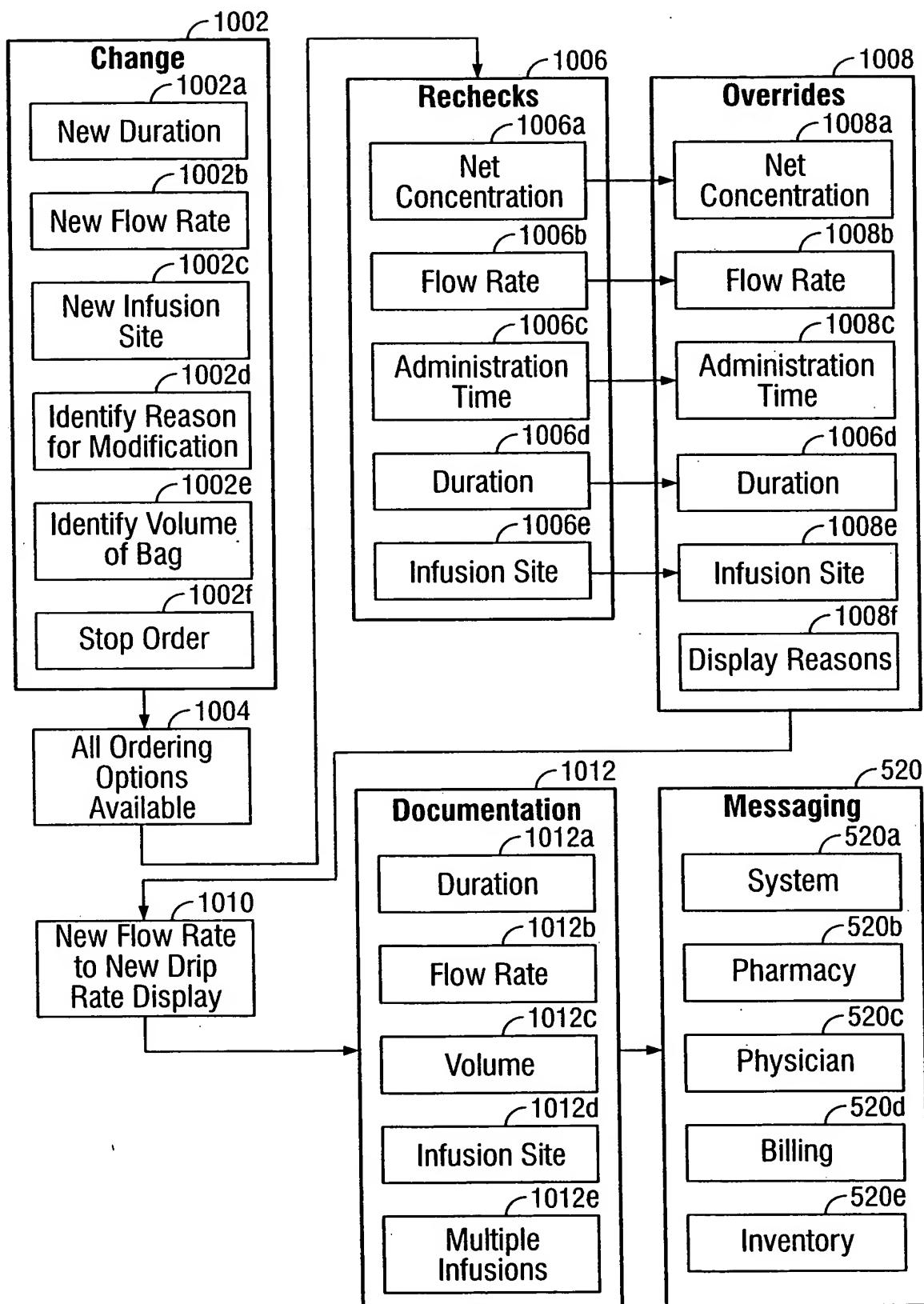


FIG. 11

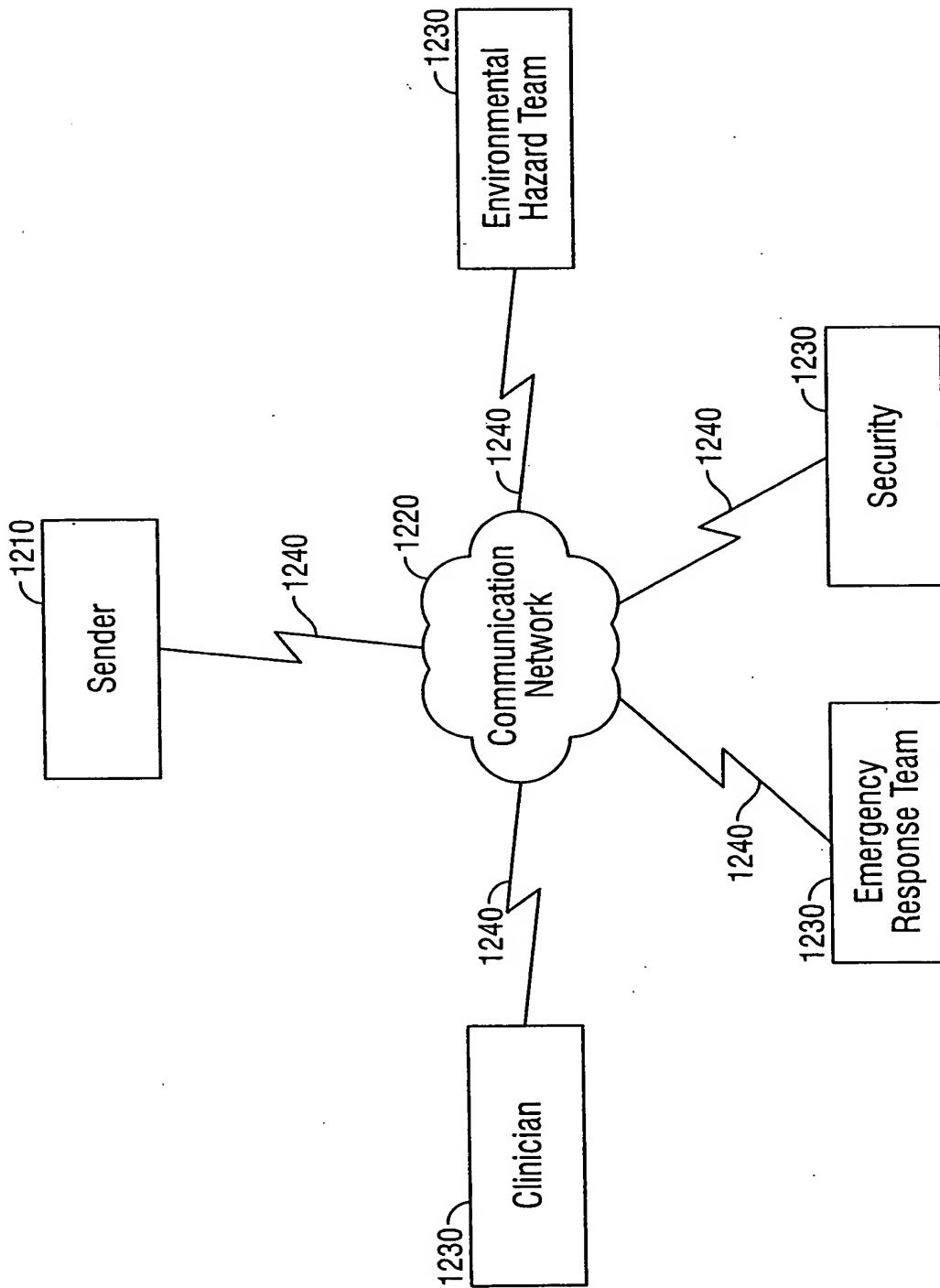


FIG. 12

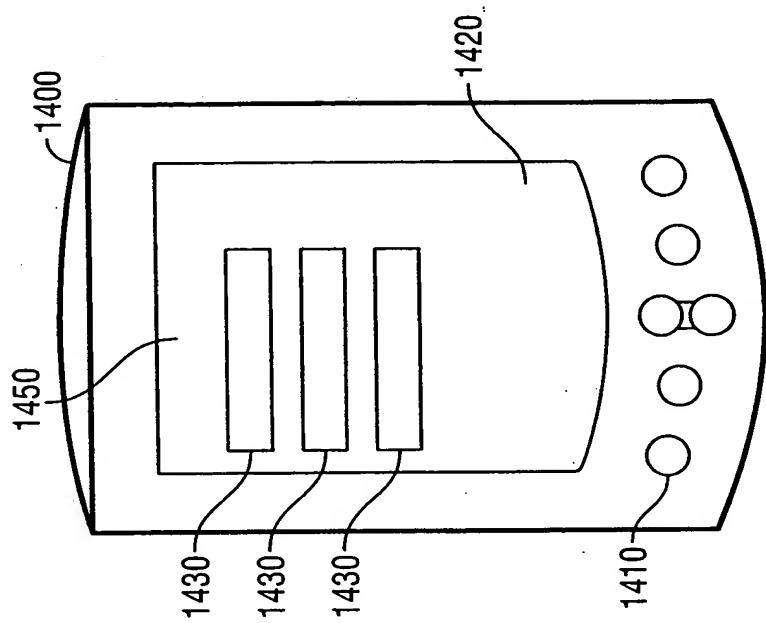


FIG. 14

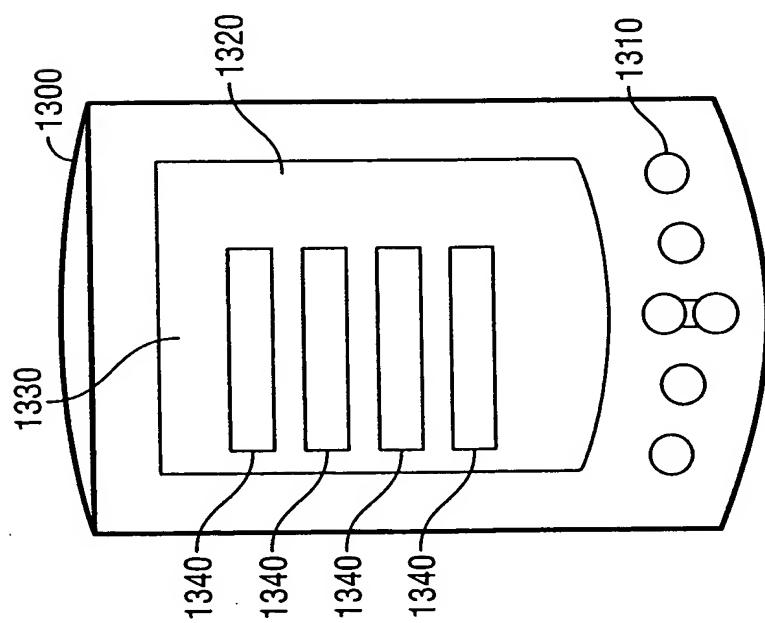
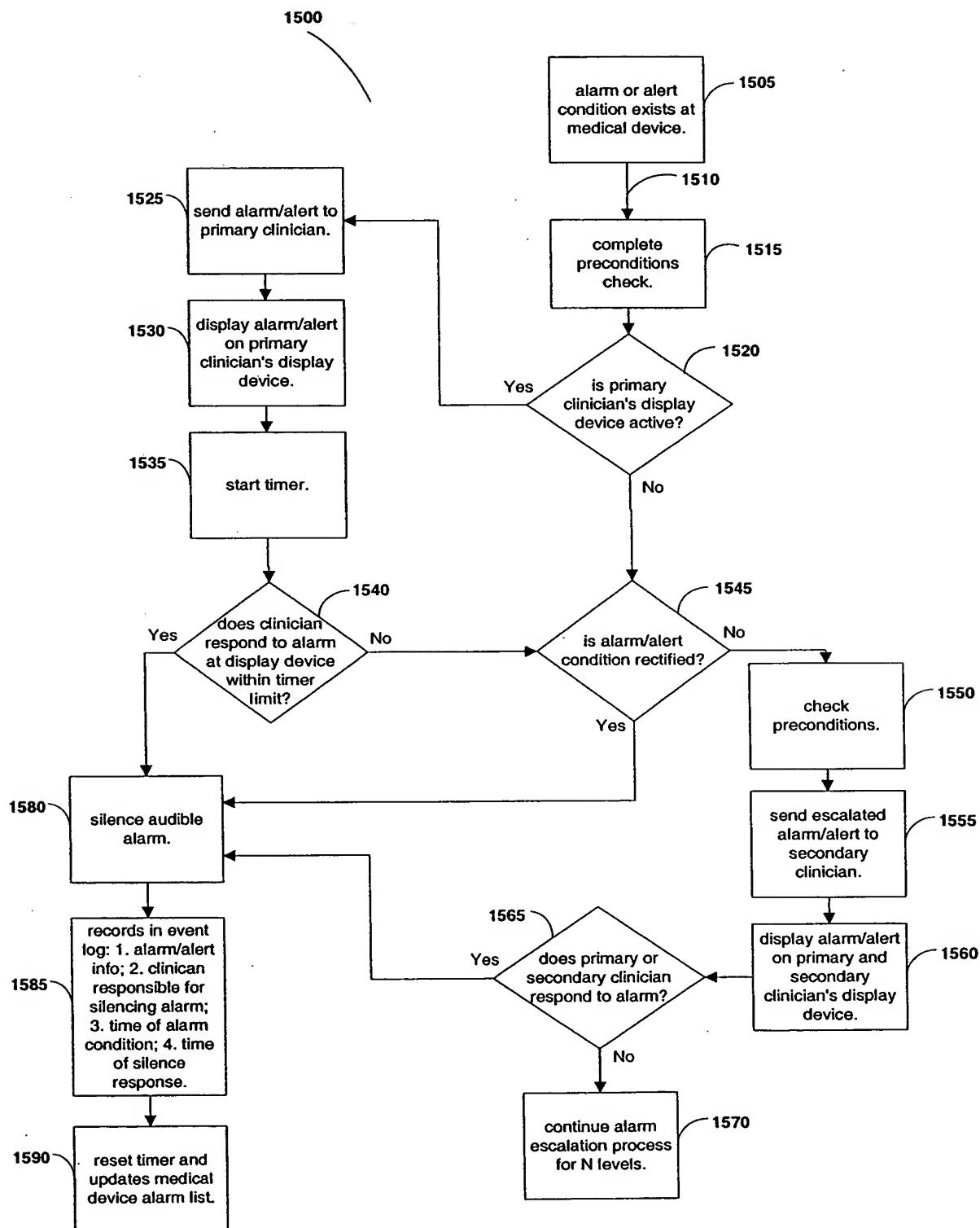


FIG. 13

FIG. 15





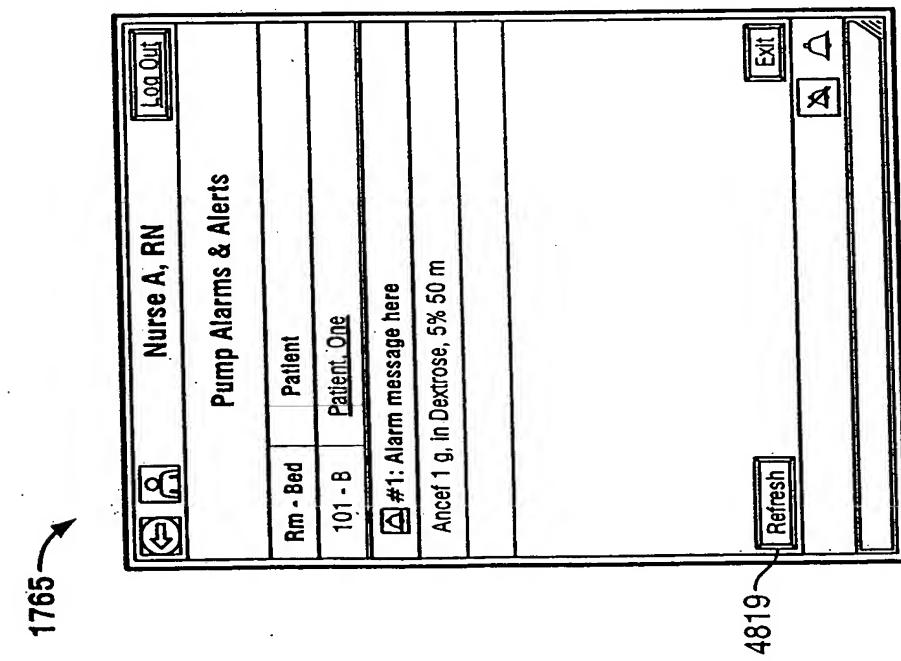


FIG. 17

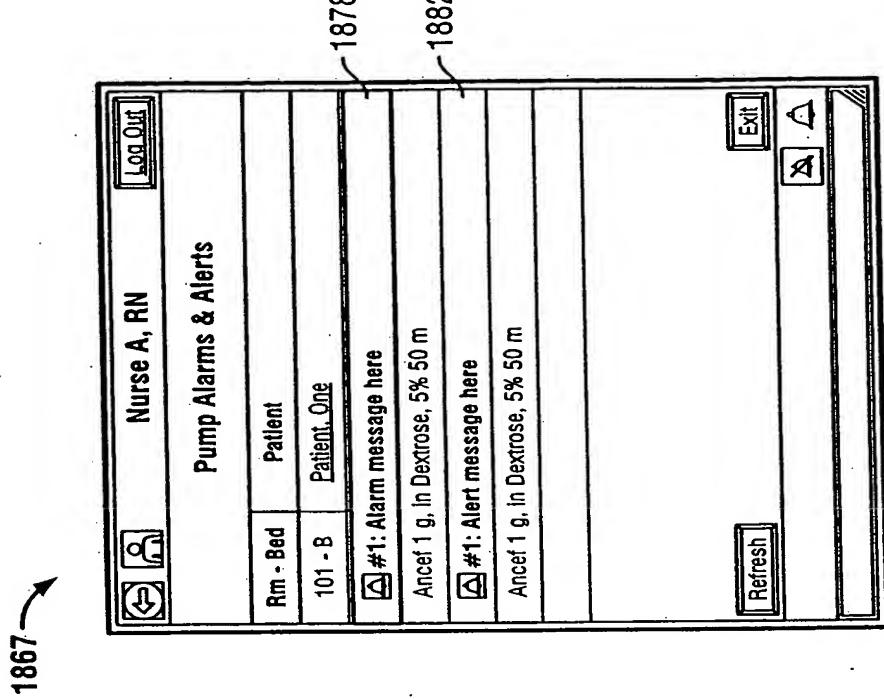


FIG. 18

2005 ↗

Patient Care System	
General Hospital	
User Name: Nurse A	*
Password: *****	*
Login failed. Check User Name or Password.	
<input type="button" value="Login"/>	

FIG. 20

1903 ↗

Patient Care System	
General Hospital	
User Name: Nurse A	
Password: *****	
<input type="button" value="Login"/>	

FIG. 19

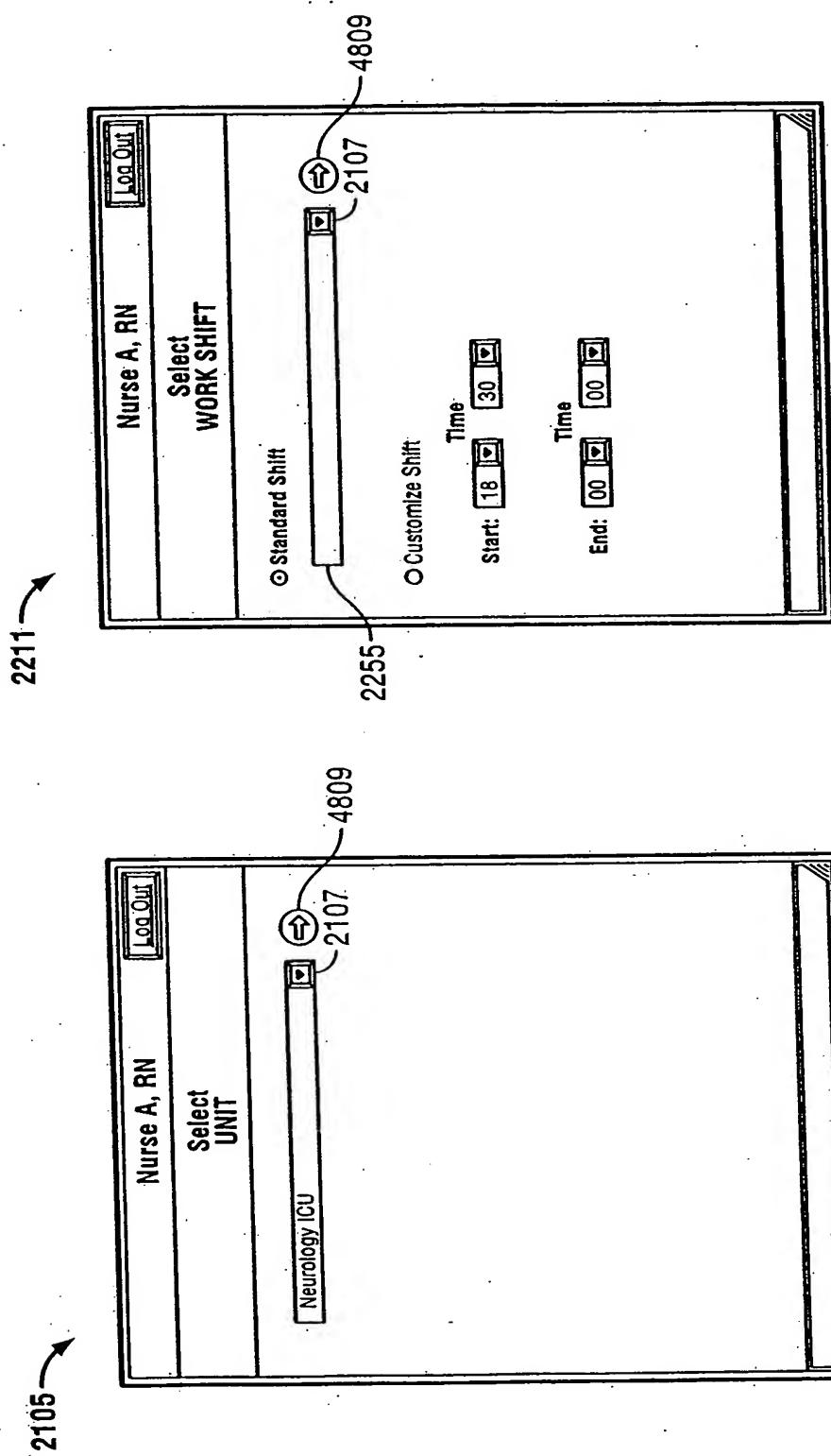


FIG. 21

FIG. 22

2417

**Nurse A, RN**

**Log Out**

**Select PATIENTS**

Rm - Bed	Patient
<input checked="" type="checkbox"/> 101 - B	Patient. One
<input type="checkbox"/> 101 - C	Patient. Two
<input type="checkbox"/> 101 - D	Patient. Three

**Add patient for:**  **Entire shift** 

**Find More Patients**

**FIG. 24**

2313

**Nurse A, RN**

**Log Out**

**My Patients**

**My Tasks** 

**Scan Patient:** 

Rm - Bed	Patient
101 - B	Patient. One
101 - C	Patient. Two
101 - D	Patient. Three

**Add More Patients**

**FIG. 23**

2315

2521a ↗

	Ninety-Three, James RN	
Ninety Nine, Douglas, Mr. (MDLOC1) MDUnit: MDRoom1 . MDBed1 Dr.Ninety, Susan		
Mini-Chart: Allergies		
Allergies & H/N		
Med Hx		
Lab Results		
Drug Allergy		
Acetaminophen		
General Allergy		
Back		

FIG. 25A

2521 ↗

	Nurse A, RN	
Patient, One - 101-B		
Mini-Chart: Allergies (NKA)		
Administer Meds/Infusions		
STOP Infusion		
RESUME Infusion		
Titrate Infusion		
Flow Rate History		
Pump Status		
Remove Patient from Shift		

FIG. 25

2521c

	Ninety-Three, James RN											
Ninety-Nine, Douglas, Mr. (MDLOC1) MDUnit1: MDRoom1 - MDBed1 Dr.Ninety, Susan Mini-Chart Allergies Allergies & Hx/W Lab Results												
<table border="1"> <thead> <tr> <th>Lab Test</th> <th>Result</th> <th>Range</th> <th>H/I</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>POTASSIUM</td> <td>3.1</td> <td>3.6-5 mmol/L</td> <td>Normal</td> <td>5/16/2003 9:00:00 AM</td> </tr> </tbody> </table>			Lab Test	Result	Range	H/I	Date	POTASSIUM	3.1	3.6-5 mmol/L	Normal	5/16/2003 9:00:00 AM
Lab Test	Result	Range	H/I	Date								
POTASSIUM	3.1	3.6-5 mmol/L	Normal	5/16/2003 9:00:00 AM								

FIG. 25C

2521b

	Ninety-Three, James RN	
Ninety-Nine, Douglas, Mr. (MDLOC1) MDUnit1: MDRoom1 - MDBed1 Dr.Ninety, Susan Mini-Chart Allergies (NKA) Allergies & Hx/W Lab Results		
All <input type="radio"/> Scheduled <input type="radio"/> PRN <input type="radio"/> Look Back Period: 24 <input type="checkbox"/> hours		
Order Acetaminophen Cap 500 MG 500 MG = 1 CAP Oral TID Admin Date: 6-3 12:53 Patient Refused 		

FIG. 25B

2627 ↗

<input type="checkbox"/>	<input type="checkbox"/>	<b>Nurse A, RN</b>	Log Out
<b>Patient, One - 101-B</b>			
<b>Mini-Chart: Allergies (NKA)</b>			
<b>&lt;- 10:19 - 12:19 -&gt;</b> <input checked="" type="checkbox"/> <b>SCHED 13</b>			
Time	Med	Last	
<input checked="" type="checkbox"/> 11:30	<b>MORPHINE SULFATE</b> Continuous Infusion	12-9 2:00	2625
<input type="checkbox"/> 13:30	<input checked="" type="checkbox"/> <b>NR</b>	<input checked="" type="checkbox"/> <b>NR</b>	Continuous Infusion (De)
<input type="checkbox"/> 15:30	<input checked="" type="checkbox"/> <b>NR</b>	<input checked="" type="checkbox"/> <b>NR</b>	Continuous Infusion (De)
<input type="checkbox"/> 17:30	<input checked="" type="checkbox"/> <b>NR</b>	<input checked="" type="checkbox"/> <b>NR</b>	Continuous Infusion (De)

2629 ↗

2631 ↗

2633 ↗

**Warning : Wear Gloves**

**① Show Edubyte info here**

RX not previously administered  
 Start Time : 6-2 14:54  
 End Time: 7-7 14:54

**FIG. 26A**

**FIG. 26**

2727b

FIG. 27B

2727a

FIG. 27A

2727d

Ninety-Three, James RN

WORKFLOW INFUSION: RESUME  
 NinetyFour-PointFive, Fred, Mr.  
 MDRoom1 - MDRoom1

Mini-Chart: Allergies (Not Specified)

Continuous Infusion  
 Dextrose Inj 20%  
 500 ML,  
 Route: Intravenous Flow Rate:  
 125 ML/H  
 Estimated Administration Period:  
 4 Hours

Stopped w/o Order  
 Please select a reason for Resume  
 Infusion  
 Site re-established

4809

FIG. 27D

2727c

Ninety-Three, James RN

WORKFLOW INFUSION: RESUME  
 NinetyFour-PointFive, Fred, Mr.  
 MDRoom1 - MDRoom1

Mini-Chart: Allergies (Not Specified)

Scan Item:

Continuous Infusion  
 Dextrose Inj 20%  
 500 ML,  
 Route: Intravenous Flow Rate: 125  
 ML/H  
 Estimated Administration Period: 4  
 Hours

Stopped w/o Order

FIG. 27C

<input type="checkbox"/>	Nurse A, RN
<input type="checkbox"/>	Patient, One - 101-B
Mini-Chart : Allergies (NKA)	
<input type="checkbox"/>	Missed Medication Please select a reason for LATE:
<input type="checkbox"/> Adjust schedule for : MORPHINE SULFATE Continuous Infusion 60 MG = 30 ML Route: Injection Flow Rate: 30 ML/H Estimated Admin. Period: 1 Hour	

FIG. 29

FIG. 28

**3135** →

**4857** →

**3045** →

**3047** →

**3135 (Top Screenshot):**

**User Interface Elements:**

- Log Out
- Nurse A, RN
- Patient, One - 101-B
- Mini-Chart: Allergies (NKA)
- <- 10:19 - 12:19 ->
- SCHED 13

**Medication Schedule Data:**

Time	Med	Last
12:30	MORPHINE SULFATE Continuous Infusion 2:00	12:9
13:30	NR	△
13:30	Continuous Infusion De SI	2839
15:30	NR	△
17:30	NR	△

**3047 (Bottom Screenshot):**

**User Interface Elements:**

- Log Out
- Nurse A, RN
- Patient, One - 101-B
- Mini-Chart: Allergies (NKA)
- Missed Medication
- Please select a reason for LATE

**Reasons for Late Medication:**

- Patient unavailable at sched. time
- Not Required
- Cycle Count
- Insufficient Stock
- Re-open drawer
- Maintain Admin Test
- Already have item
- Item Unavailable
- Refused

**FIG. 31**

**FIG. 30**

3351 ↗

**Nurse A, RN**  
 Patient, One - 101-B  
 Mini-Chart: Allergies (NKA)

Scan Depot:  

Search Items

Item	Depot/Unit	Qty
Morphine Sulfate Inj	In other	units
2 MG/ML QA		
Morphine Sulfate Inj	In other	units
2 MG/ML QA		

**SKID Scan Depot**

FIG. 33

3235 ↗

**Nurse A, RN**  
 SCHED 13

Time	Med	Last
11:30	MORPHINE SULFATE Continuous infusion	12/9 2:00
	△	3225
13:30	Continuous infusion (De SI)	
	NR	
15:30	Continuous infusion (De SI)	
	NR	
17:30	Continuous infusion (De SI)	
	NR	

**Get Items**

3249 ↗

FIG. 32

3569 ↗

<input type="button" value="Log Out"/>	<b>Nurse A, RN</b>																	
<input type="button" value="Patient, One - 101-B"/>																		
<input type="button" value="Mini-Chart : Allergies (NKA)"/>																		
<input type="button" value="Scan Depot: [ ]"/>	<input type="button" value="Scan Depot: [ ]"/>																	
Scan code is invalid.																		
<table border="1"> <thead> <tr> <th>Item</th> <th>Depot/Unit</th> <th>Qty</th> </tr> </thead> <tbody> <tr> <td>Morphine Sulfate Inj</td> <td>In other</td> <td></td> </tr> <tr> <td>2 MG/ML QA</td> <td>units</td> <td></td> </tr> <tr> <td>Morphine Sulfate Inj</td> <td>In other</td> <td></td> </tr> <tr> <td>2 MG/ML QA</td> <td>units</td> <td></td> </tr> <tr> <td colspan="2"><input type="button" value="Skip Scan Depot"/></td> </tr> </tbody> </table>		Item	Depot/Unit	Qty	Morphine Sulfate Inj	In other		2 MG/ML QA	units		Morphine Sulfate Inj	In other		2 MG/ML QA	units		<input type="button" value="Skip Scan Depot"/>	
Item	Depot/Unit	Qty																
Morphine Sulfate Inj	In other																	
2 MG/ML QA	units																	
Morphine Sulfate Inj	In other																	
2 MG/ML QA	units																	
<input type="button" value="Skip Scan Depot"/>																		

FIG. 35

3465 ↗

<input type="button" value="Log Out"/>	<b>Nurse A, RN</b>
<input type="button" value="Patient, One - 101-B"/>	
<input type="button" value="Mini-Chart : Allergies (NKA)"/>	
<input type="button" value="Scan Item: [ ]"/>	<input type="button" value="Scan Item: [ ]"/>
<b>MORPHINE SULFATE</b> Continuous Infusion 60 MG = 30 ML Route: Injection Flow Rate: 30 ML/H Estimated Admin. Period: 1 Hour Quantity: <input type="text" value="30"/> ML(s) Get: 30 ML	
<input type="checkbox"/> Warning: Wear Gloves <input type="checkbox"/> Show Edubyte Info here	

FIG. 34

3771 ↗

<input type="checkbox"/>	<input type="checkbox"/>	Nurse C, RN	Log Out
Patient, Three , Mr. 100-C			
Mini-Chart : Allergies			
<b>Verify Route, Line &amp; Site</b>			
Rx Sodium Chloride 0.9% Continuous Infusion Rx Sodium Chloride 0.9% 1000 ML Route: Intravenous Flow Rate: 50 ML/H Estimated Administration Period: 20 Hours Please hang the bag, program the pump, and record the following information but DO NOT start the pump channel until instructed.			
Route: <input type="checkbox"/> Intramuscular Line: <input type="checkbox"/> Central Site: <input type="checkbox"/> Right Forearm <input type="checkbox"/> Compare Route			

4817 ↗

FIG. 37

3657 ↗

<input type="checkbox"/>	<input type="checkbox"/>	Nurse A, RN	Log Out
Patient, One - 101-B			
Mini-Chart : Allergies (NKA)			
<input type="checkbox"/>	Scan Patient:	<input type="checkbox"/>	
3661 ↗ If Cannot admin, select a reason: <input type="checkbox"/> 3659			
Not Req Due to Monitoring Result Patient Unavailable Refused			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Waste/Return			

3663 ↗

FIG. 36

3885 ↗

<input type="button" value="Log Out"/>	Nurse C, RN
<input type="button" value="Patient"/>	Patient, Three , Mr. 100-C
<input type="button" value="Mini-Chart"/>	Mini-Chart : Allergies
<b>Scan Pump Channel</b>	
Rx Sodium Chloride 0.9% Continuous Infusion Rx Sodium Chloride 0.9% 1000 ML Route: Intravenous Flow Rate: 50 ML/H Estimated Administration Period: 20 Hours	
<input type="button" value="Scan Pump Channel"/>	4809

FIG. 38A

3881 ↗

<input type="button" value="Log Out"/>	Nurse C, RN
<input type="button" value="Patient"/>	Patient, Three , Mr. 100-C
<input type="button" value="Mini-Chart"/>	Mini-Chart : Allergies
<b>Select Pump Channel Mode</b>	
Rx Sodium Chloride 0.9% Continuous Infusion Rx Sodium Chloride 0.9% 1000 ML Route: Intravenous Flow Rate: 50 ML/H Estimated Administration Period: 20 Hours	
3882 ↗	
<b>Select Pump Channel Mode:</b>	
<input type="button" value="Primary"/>	Playback <input type="checkbox"/>
3884 ↗	3883

FIG. 38

3987 ↗

	<b>Nurse A, RN</b>									
Patient, One Rm - Bed 101-B Dr. One (111)111-1111 ext. 1										
<b>Pharm &amp; Pump Comparison</b>										
Amecl 1 g, In Dextrose, 5% 50 mL run at 100 mL/hr										
<table border="1"> <tr> <td></td> <td>Pharm Label</td> <td>=</td> <td>Pump Settings</td> </tr> <tr> <td>Rate</td> <td>100 mL/hr</td> <td></td> <td>100 mL/hr</td> </tr> </table>				Pharm Label	=	Pump Settings	Rate	100 mL/hr		100 mL/hr
	Pharm Label	=	Pump Settings							
Rate	100 mL/hr		100 mL/hr							
<b>Comparison MATCHES.</b> Press "Start" Key on pump.										
<input type="button" value="OK"/>										

**FIG. 39A**

3986 ↗

	<b>Nurse C, RN</b>	
Patient, Three, Mr. 1 West: 100-C MD1, Test		
<b>Pharm &amp; Pump Comparison</b>		
Continuous Infusion Rx Sodium Chloride 0.9% 1000 mL Route: Intravenous Flow Rate: 60 mL/hr - Estimated Administration Period: 20 Hours		
Program the Pump Channel and:  If this is a PRIMARY - Click COMPARE below Now and wait until instructed to start pump channel.		
> If this is a PIGGYBACK ... Press the "start" key on the pump Now, then Click COMPARE If Piggyback Infusion, ensure PRIMARY is placed LOWER THAN than PIGGYBACK and that PIGGYBACK roller clamp is OPEN.		
<input type="button" value="Compare"/>		
4817		

**FIG. 39**

4187 ↗

Nurse A, RN									
Patient, One Rm - Bed 101-B Dr. One (111)111-1111 ext. 1									
Pharm & Pump Comparison									
Ancef 1 g, In Dextrose, 5% 50 mL run at 100 mL/hr									
<table border="1"> <thead> <tr> <th>Pharm Label</th> <th>Pump Settings</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td>Rate</td> <td>100 mL/hr</td> </tr> <tr> <td></td> <td>50 mL/hr</td> </tr> </tbody> </table>		Pharm Label	Pump Settings			Rate	100 mL/hr		50 mL/hr
Pharm Label	Pump Settings								
Rate	100 mL/hr								
	50 mL/hr								
<small>Cannot Compare. Press "Rate" key and COMPARE.</small>									
<table border="1"> <thead> <tr> <th colspan="2">4817</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		4817							
4817									

4825 ↗

Nurse A, RN					
Patient, One Rm - Bed 101-B Dr. One (111)111-1111 ext. 1					
Pharm & Pump Comparison					
Ancef 1 g, In Dextrose, 5% 50 mL run at 100 mL/hr					
<table border="1"> <thead> <tr> <th>Pharm Label</th> <th>Pump Settings</th> </tr> </thead> <tbody> <tr> <td>100 mL/hr</td> <td>50 mL/hr</td> </tr> </tbody> </table>		Pharm Label	Pump Settings	100 mL/hr	50 mL/hr
Pharm Label	Pump Settings				
100 mL/hr	50 mL/hr				
<small>Please Verify with PHYSICIAN Order. Then to accept the mismatch, press "Start" key on pump and then click "OK" below. You can also reprogram the pump and then click "Compare again."</small>					
<table border="1"> <thead> <tr> <th colspan="2">4817</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>		4817			
4817					

FIG. 41

FIG. 40

4391 ↗

**Nurse A, RN**

**Patient, One**  
**Rm - Bed 101-B**  
**Dr. One (111)111-1111 ext. 1**

**Pump Status**

Δ Acet 1 g, In Dextrose, 5% 50 mL  
 run at 100 mL/hr

Rate	60 mL/h
Volume Infused	5 mL
Volume Remaining	45 mL
Time Remaining	45 min.

\*NOTE: Pump Override Accepted

**Exit**

4287 ↗

**Nurse A, RN**

**Patient, One**  
**Rm - Bed 101-B**  
**Dr. One (111)111-1111 ext. 1**

**Pharm & Pump Comparison**

Acet 1 g, In Dextrose, 5% 50 mL  
 run at 100 mL/hr

	Pharm	Pump	?	Settings
Rate	100 mL/hr	?	7 mL/hr	

Cannot Compare. Press "Start" key on pump and click COMPARE, to retry comparison.

**4819 ↗**

**COMPARE**

4817 ↗

**FIG. 43**

**FIG. 42**

4501 ↗

**Nurse A, RN** **Log Out**

**Communication Loss Alert**  
 for the following Patients

Rm - Bed	Patient
101 - B	<input checked="" type="checkbox"/> Patient_One
101 - C	<input checked="" type="checkbox"/> Patient_Two
101 - D	<input checked="" type="checkbox"/> Patient_Three

**Trouble Shooting Tips:**  
 If a Yellow light is flashing on the  
 WIRELESS MODULE and it is beeping,  
 the system may be down. Call IT or  
 Biomed.  
 • OR •  
 Plug in and turn on all pumps.  
 If that does not resolve the problem,  
 Call IT or Biomed.

4493 ↗

**Nurse A, RN** **Log Out**

**Patient One**  
 Rm - Bed 101-B  
 Dr. One (111)111-1111 ext. 1

**Flow Rate History**

△ Anest 1 g. in Dextrose, 5% 50 ml  
 run at 100 mL/hr

60 mL/h	@ 10:55 AM 3/13
70 mL/h	@ 10:55 AM 3/13
80 mL/h	@ 10:54 AM 3/13

**Exit**

**Refresh**

**FIG. 45A**

**FIG. 44**

4603 ↗

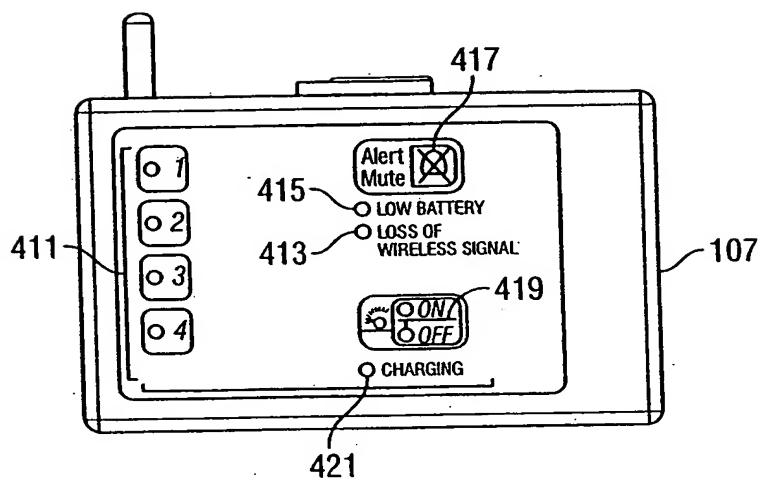
	<b>Nurse A, RN</b>	<b>Log Out</b>
<b>Low Battery Alert</b> for the following Patients		
<b>Rm - Bed</b>	<b>Patient</b>	<b>Patient One</b>
101 - B		
Less than 30 minutes of battery left in WIRELESS MODULE.		
Plug WIRELESS MODULE into power outlet.		
<b>Refresh</b>	<b>Exit</b>	

**FIG. 46**

4501 ↗

	<b>Nurse A, RN</b>	<b>Log Out</b>
<b>Communication Loss Alert</b> for the following Patients		
<b>Rm - Bed</b>	<b>Patient</b>	<b>Patient One</b>
101 - B	<input checked="" type="checkbox"/>	
<b>Trouble Shooting Tips:</b>		
If a Yellow light is flashing on the WIRELESS MODULE and it is beeping, the system may be down. Call IT or Biomed.		
- OR -		
Plug in and turn on all pumps, if that does not resolve the problem, Call IT or Biomed.		
<b>Refresh</b>	<b>Exit</b>	

**FIG. 45B**



**FIG. 47**

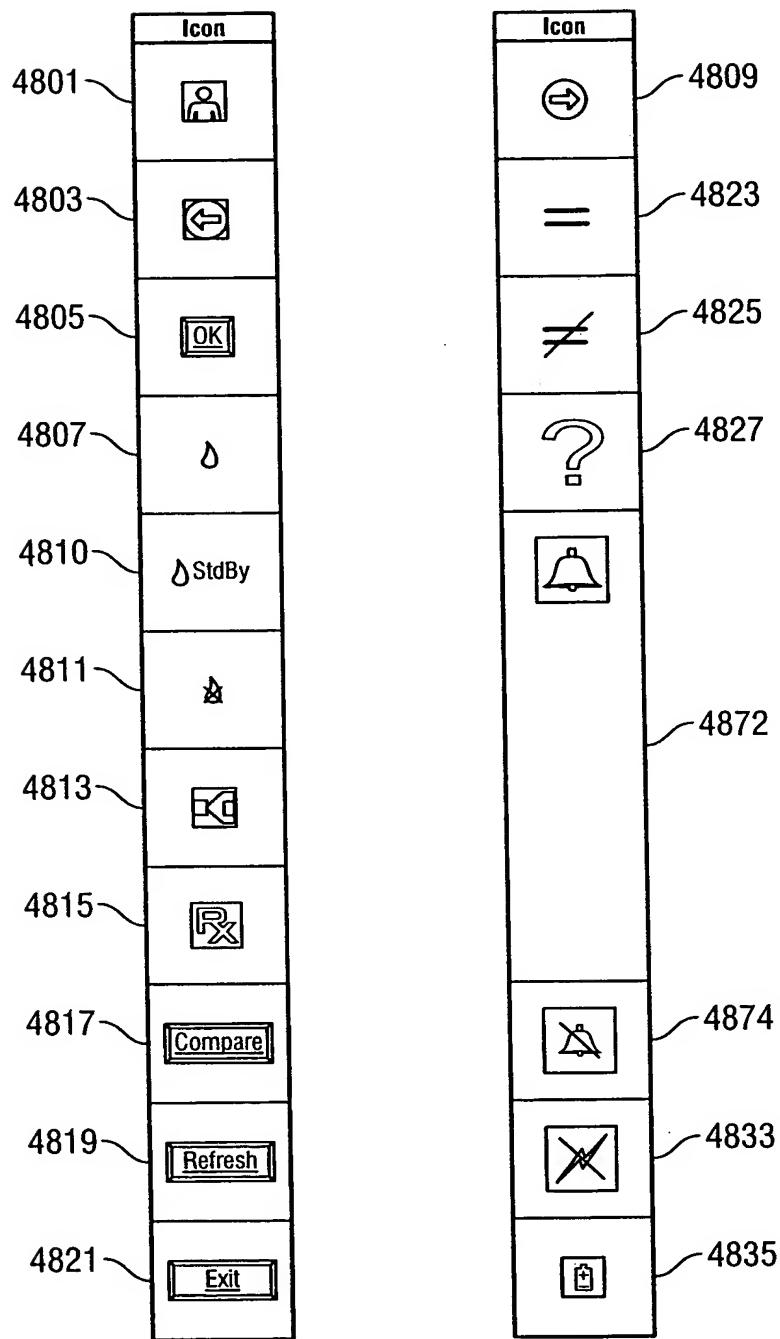


FIG. 48

FIG. 49

FIG. 50A

Time	Med	Last
14:39	Diogoxin Tab 0.125 MG q	
NR	TAB Oral qD	MP

FIG. 50

5101 →

Ninety-Three, James RN

Eightytwo, Anthony, MDRoom1-  
MDDefaultBed

Mini-Chart: Allergies

ACETAMINOPHEN/CODEINE #4  
Acetaminophen w/ Codeine Tab  
300-60 MG 60 MG = 1 TAB Oral  
QID

Drawer 1, Bin 05

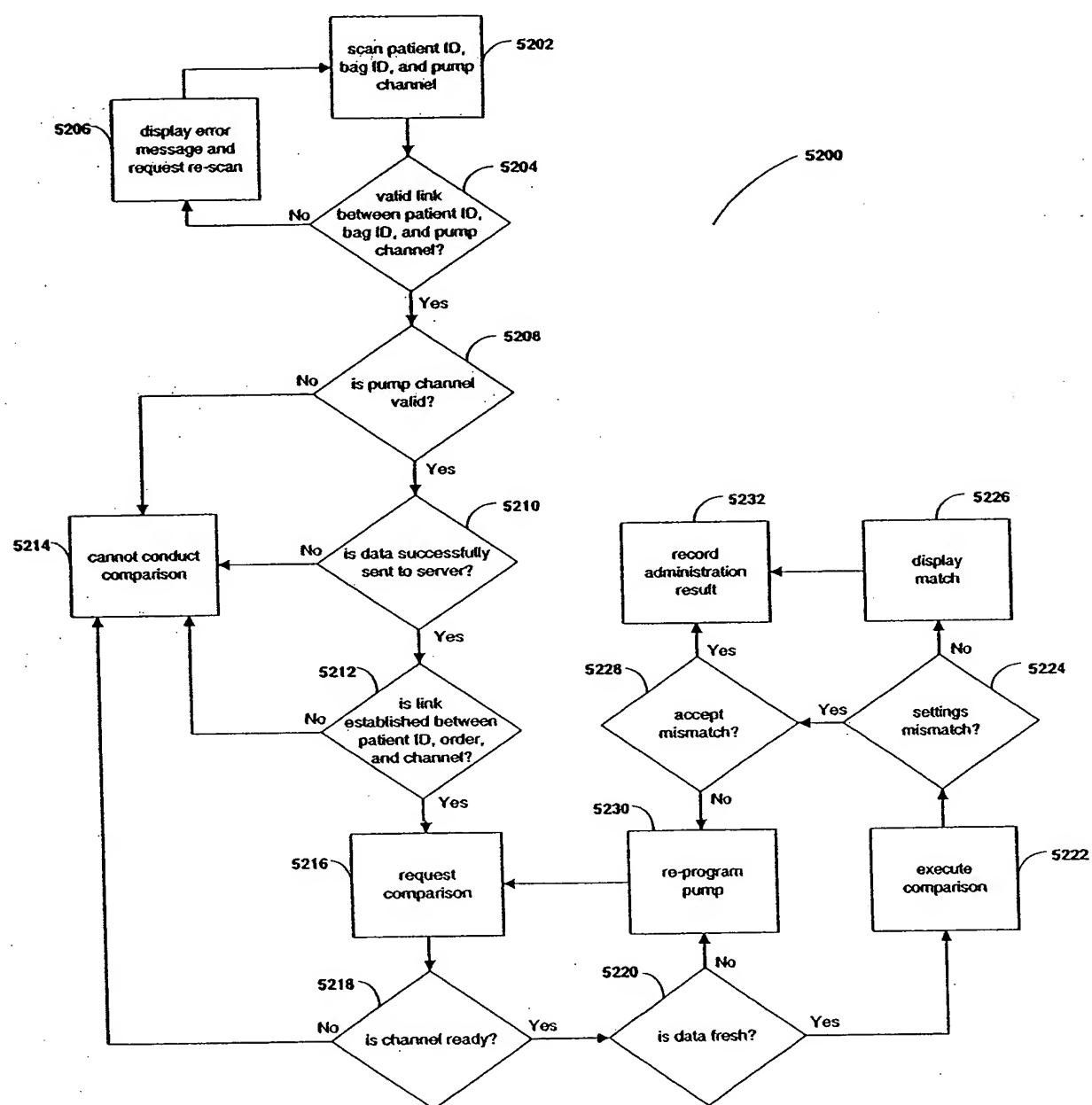
Count before the removal of  
medication(first count)

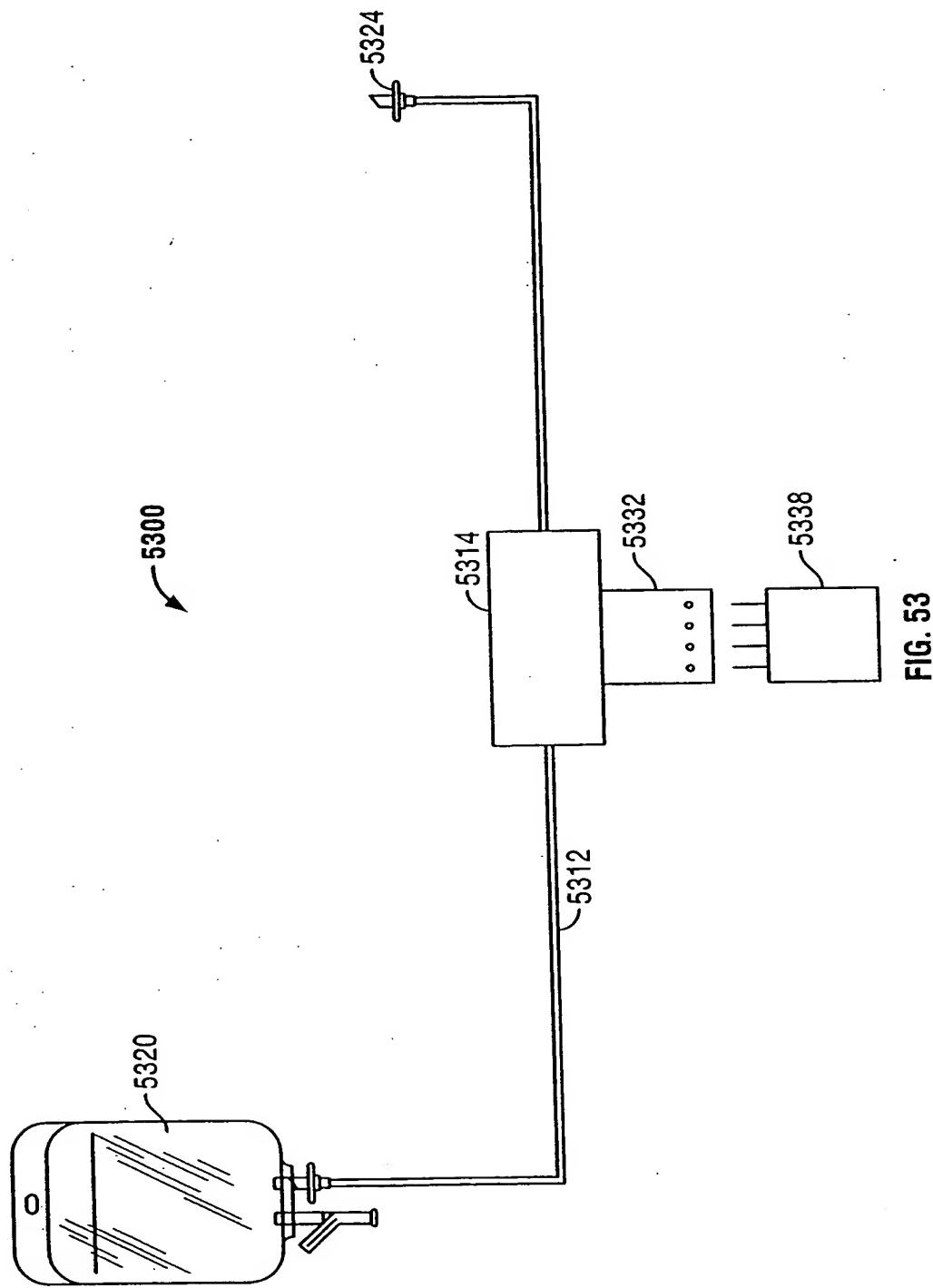
Qty on hand:

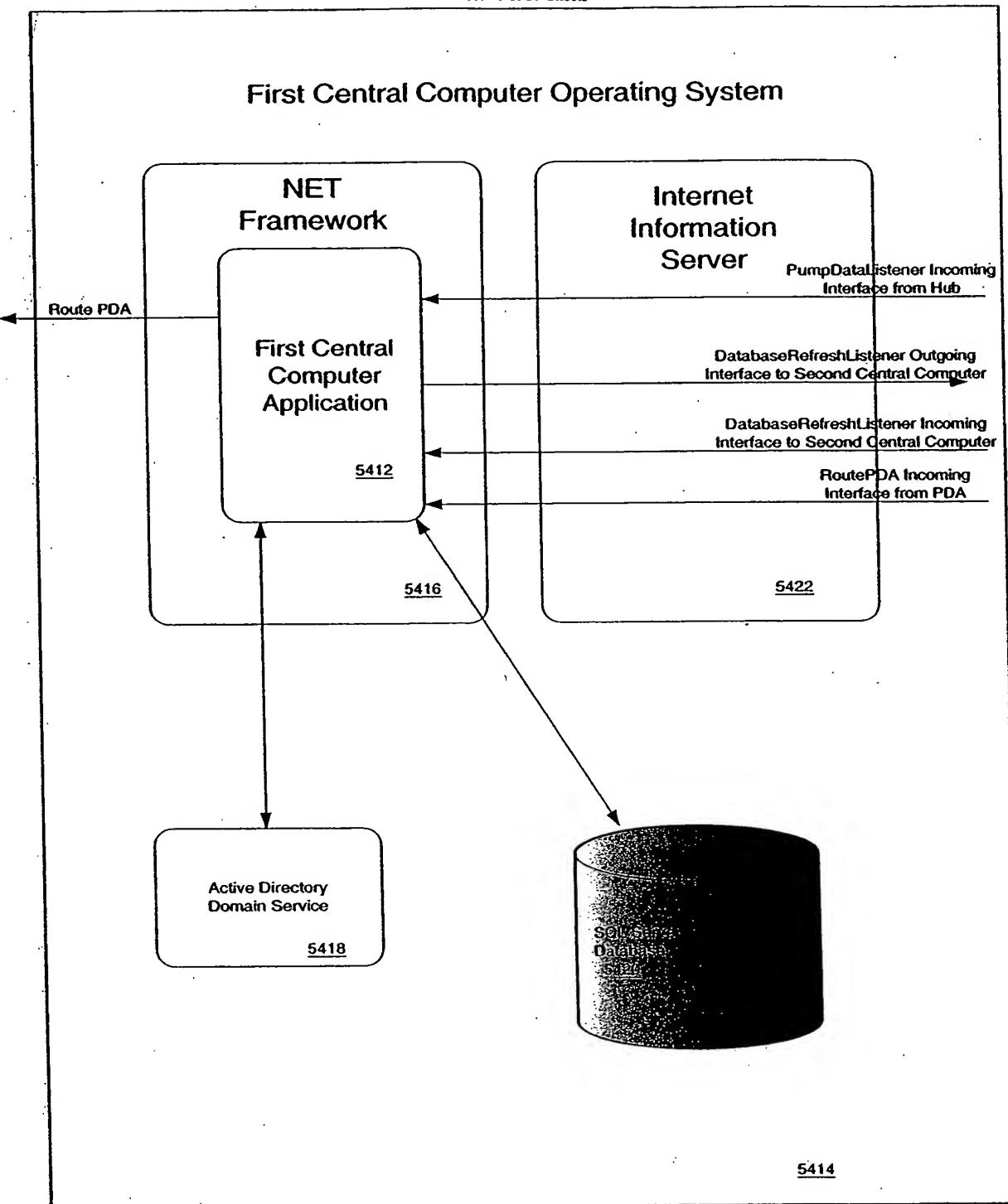
TAB(S)

FIG. 51

FIG. 52







**FIG. 54**

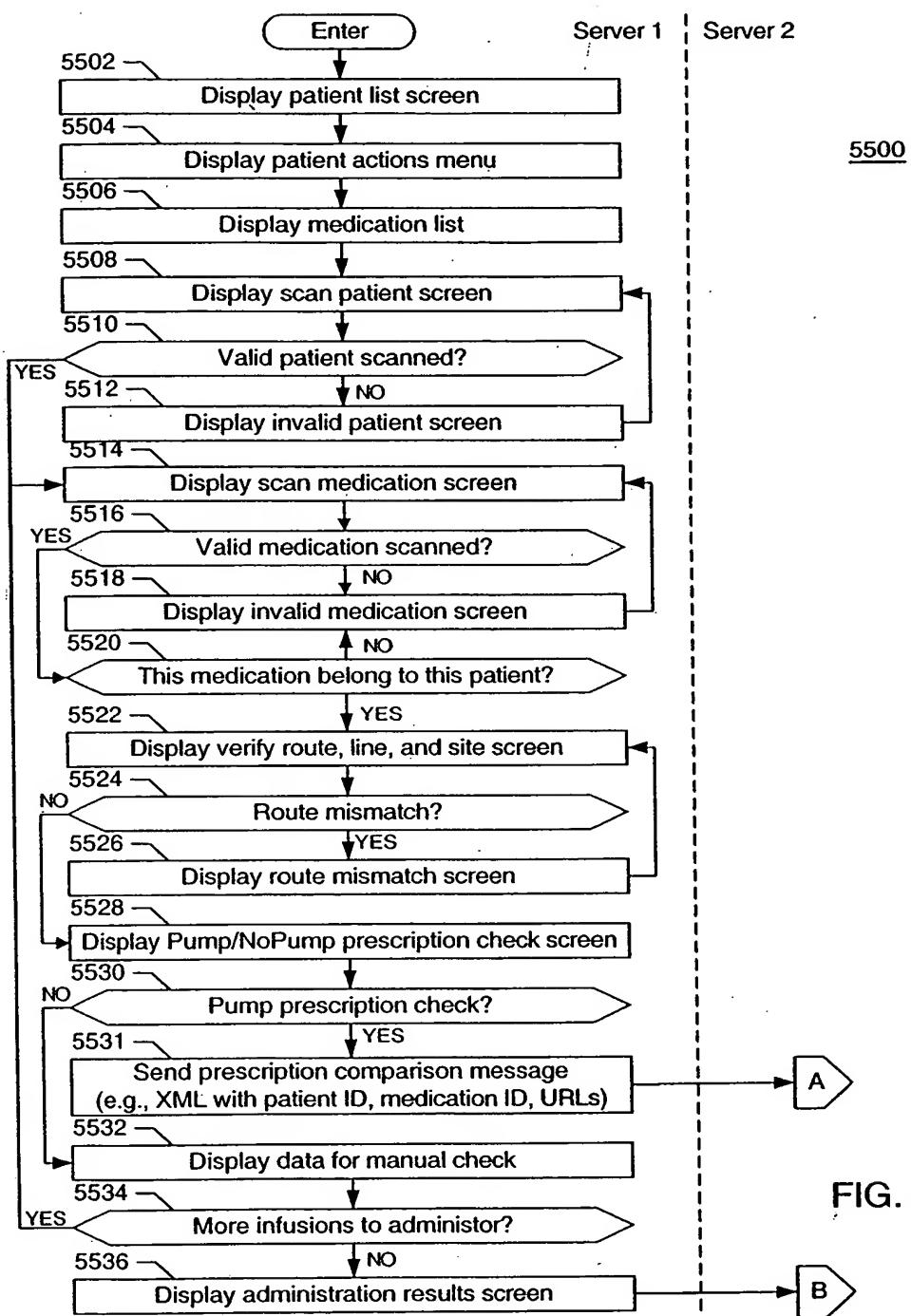


FIG. 55A

FIG. 55B

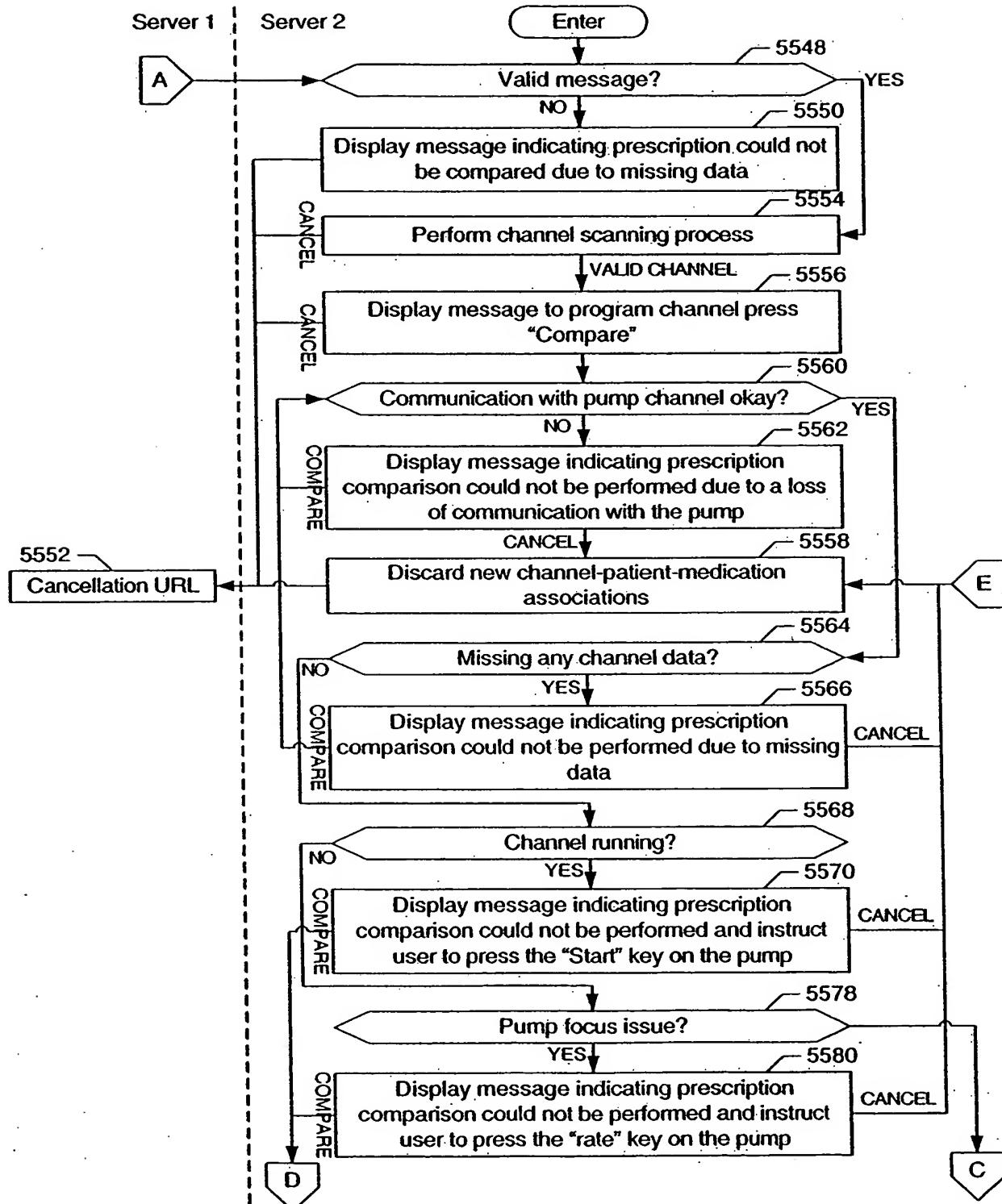
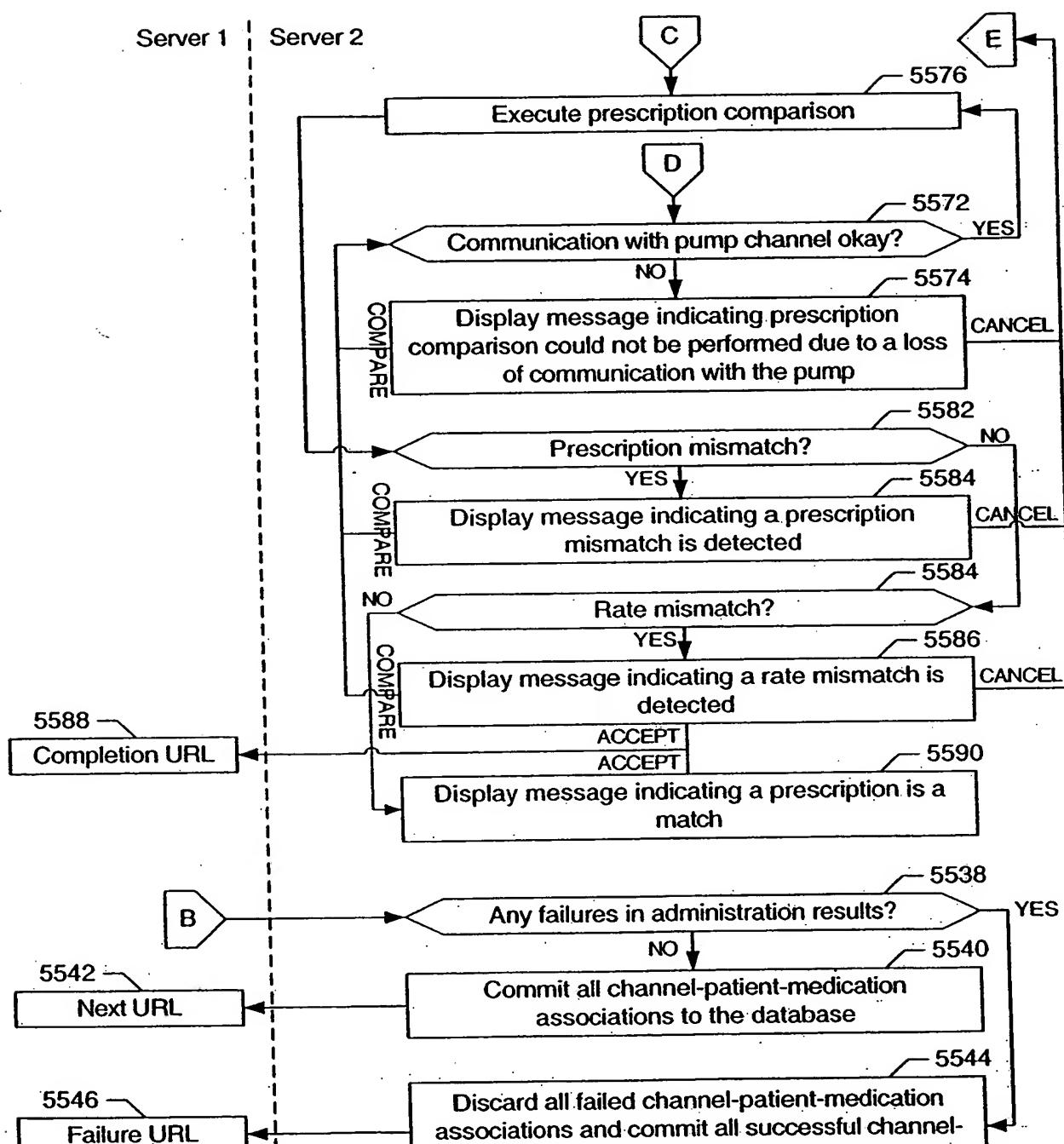


FIG. 55C



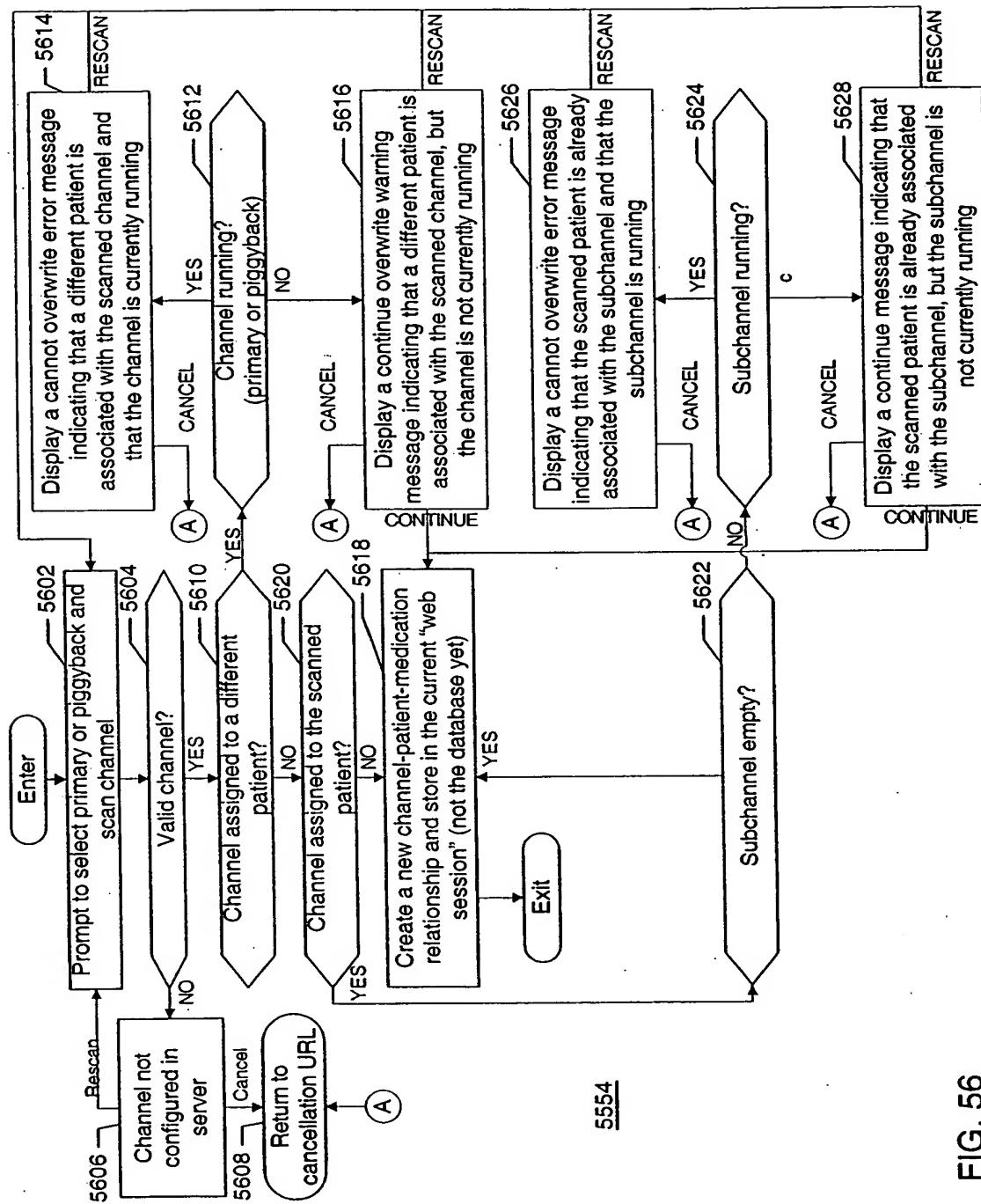


FIG. 56

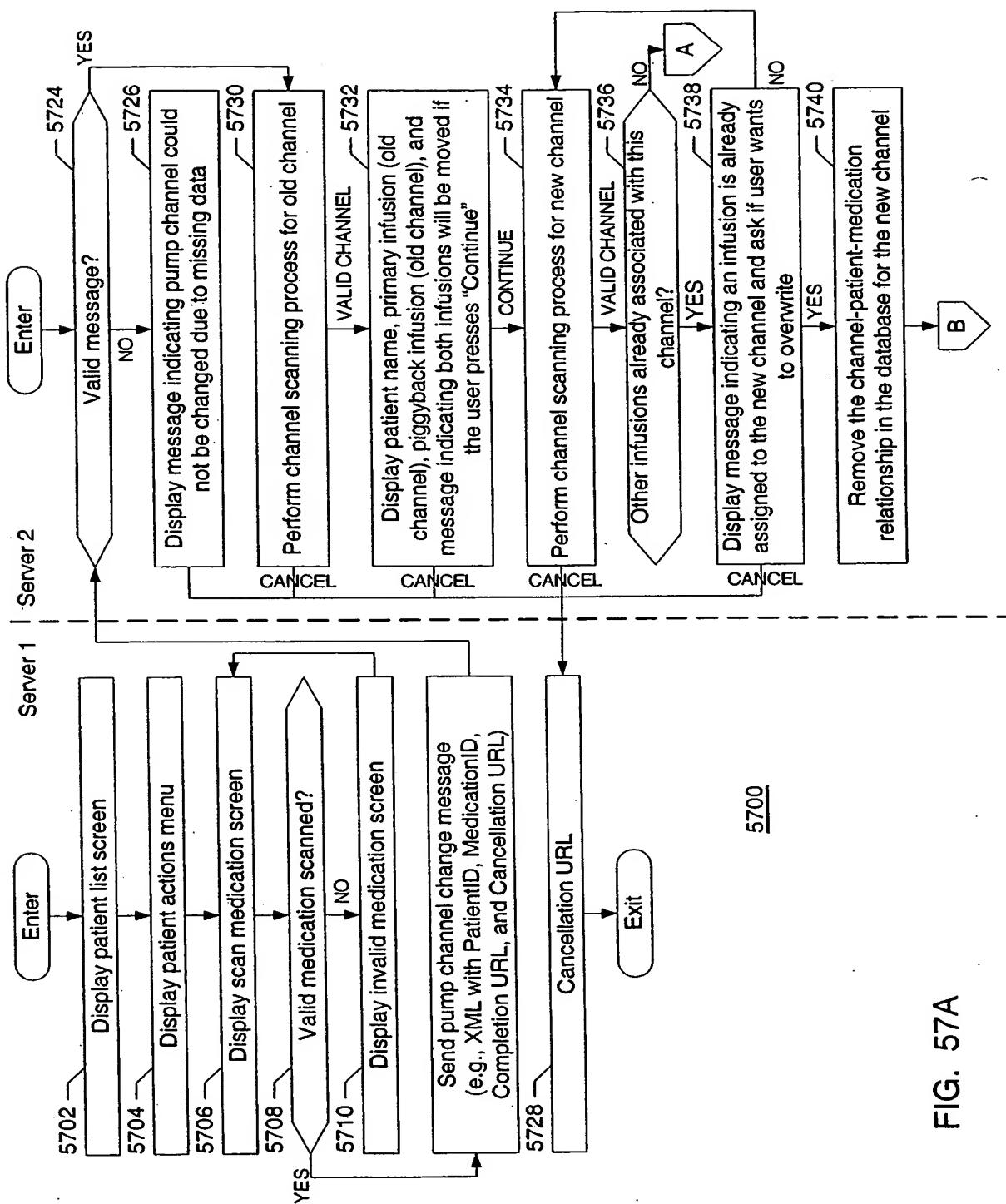


FIG. 57A

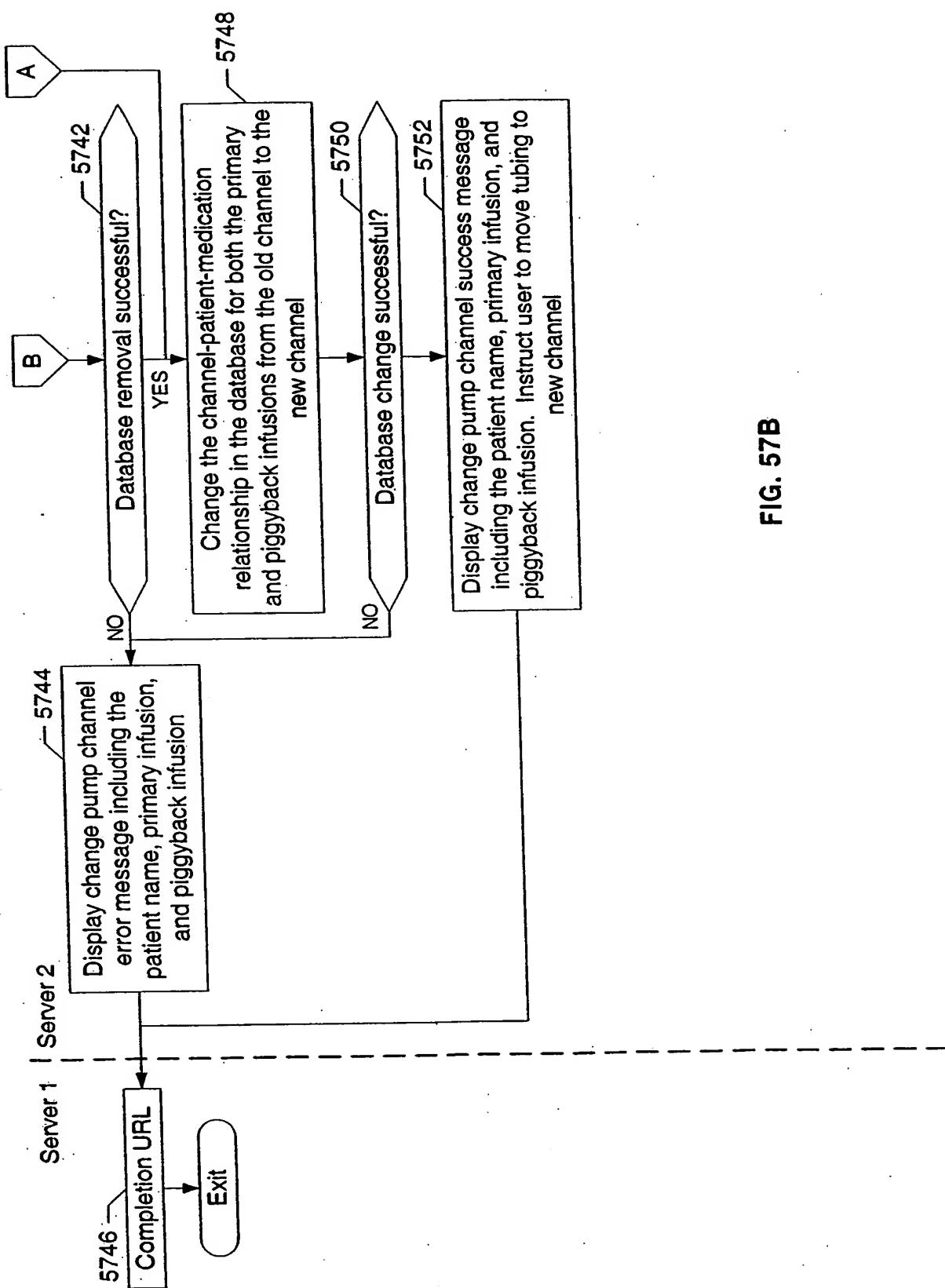


FIG. 57B

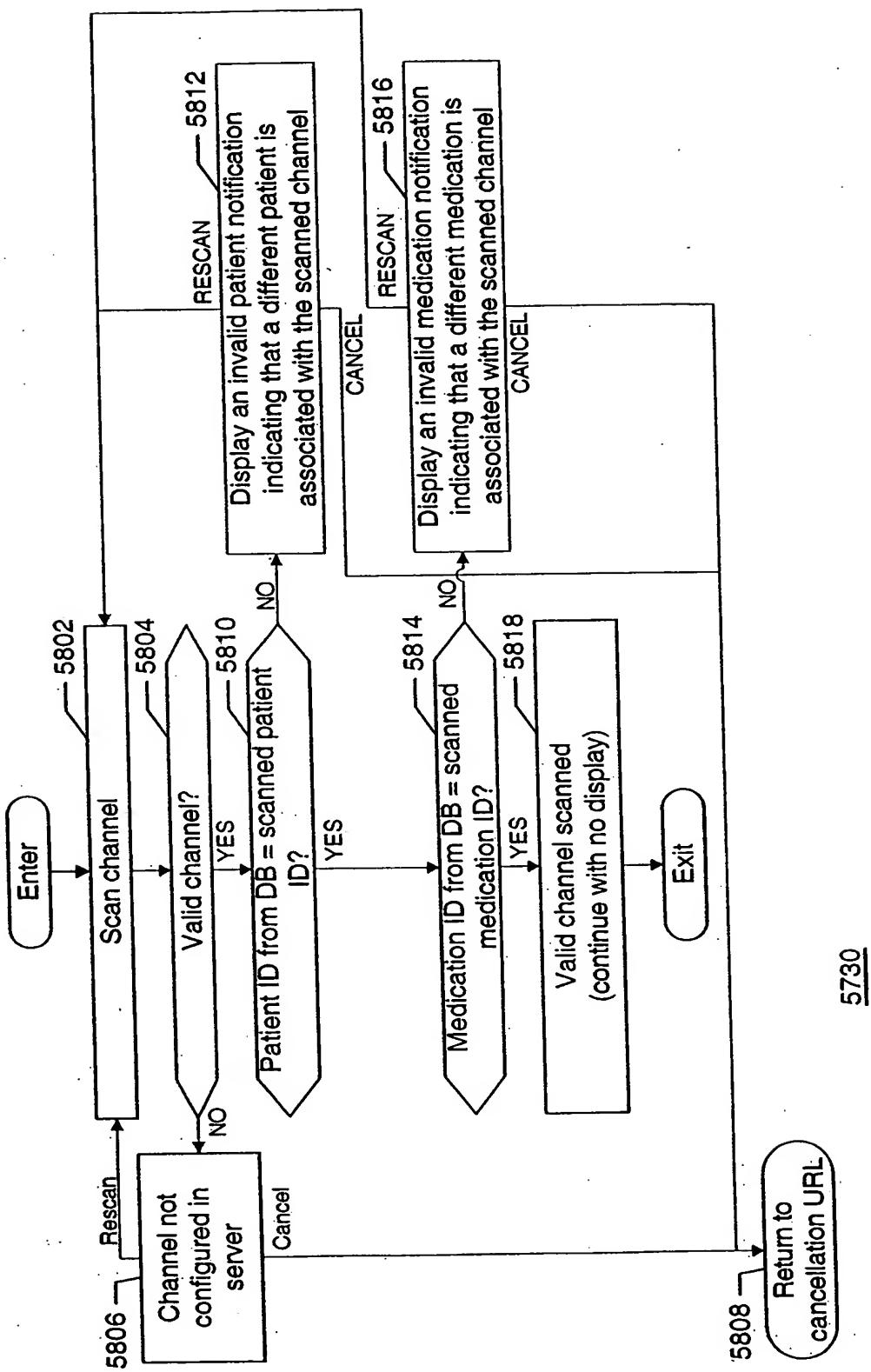


FIG. 58

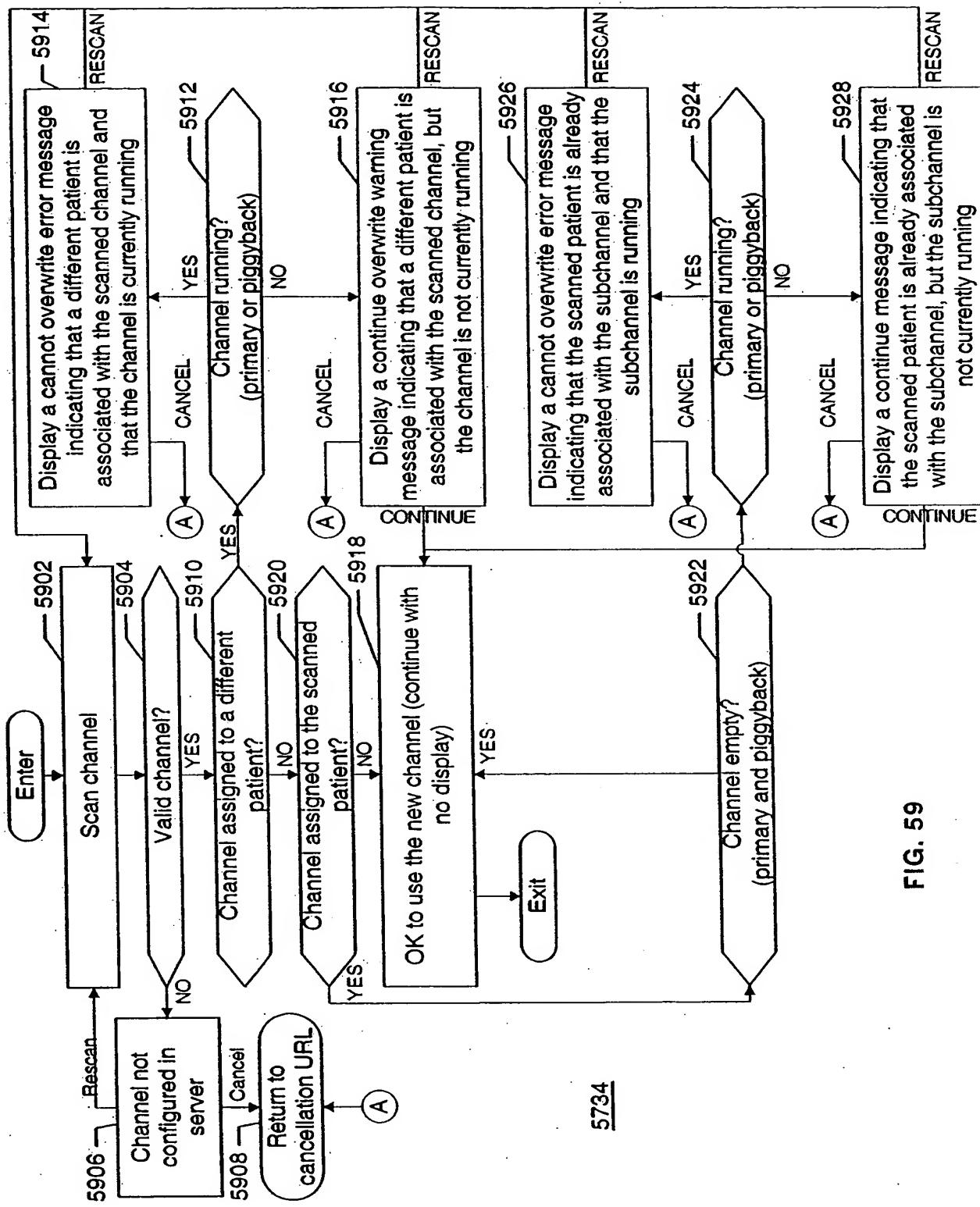


FIG. 59

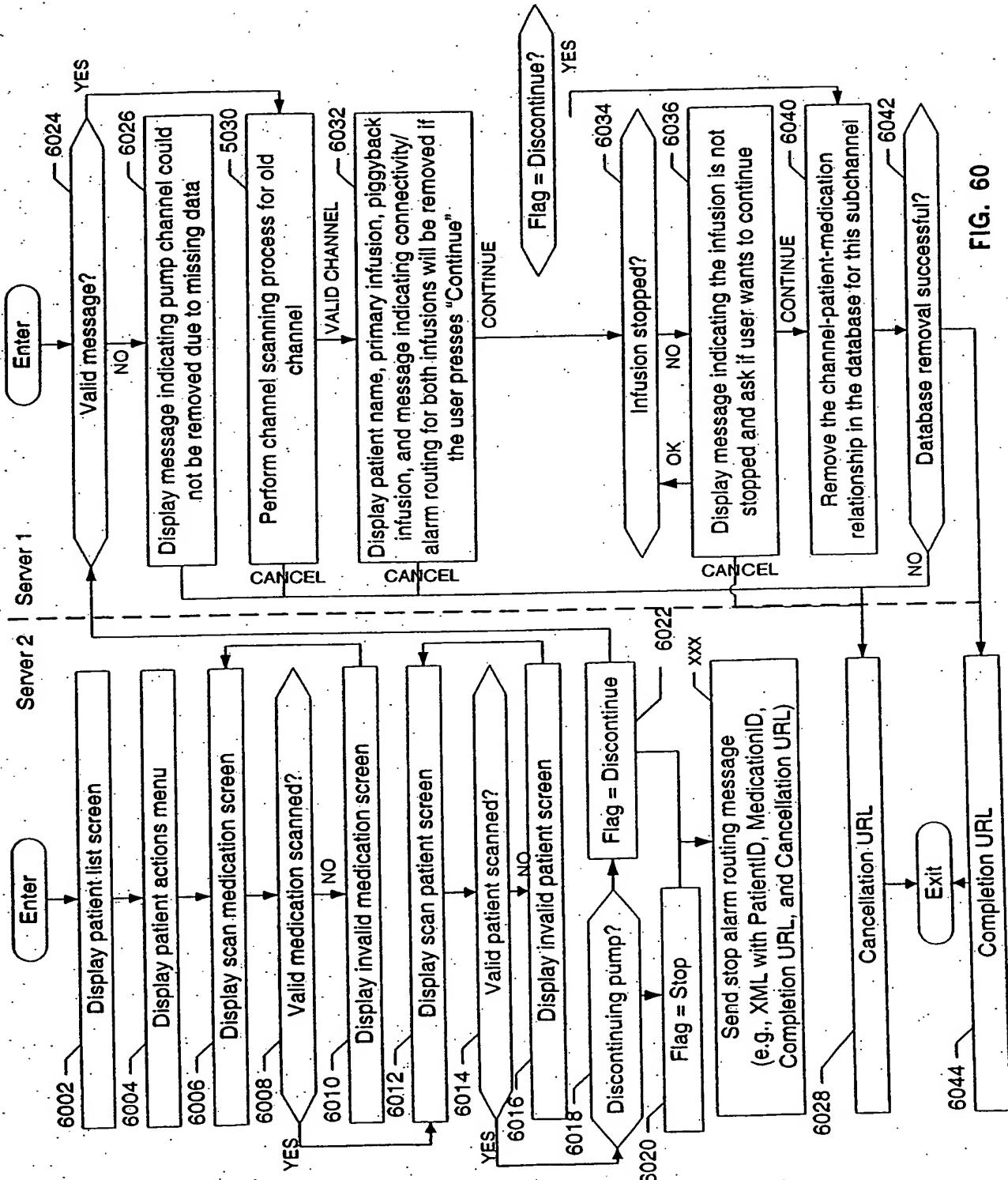


FIG. 60

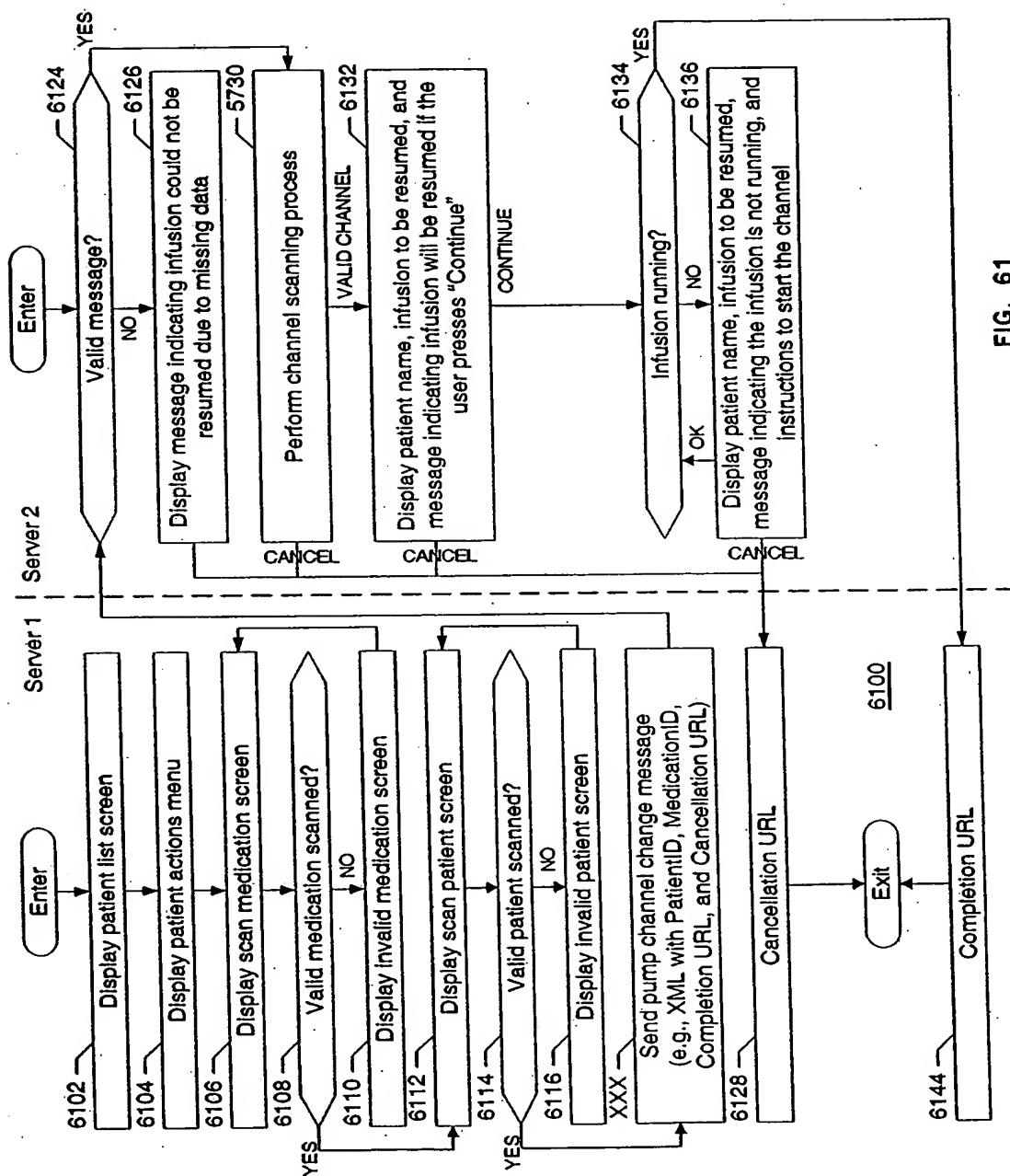


FIG. 61

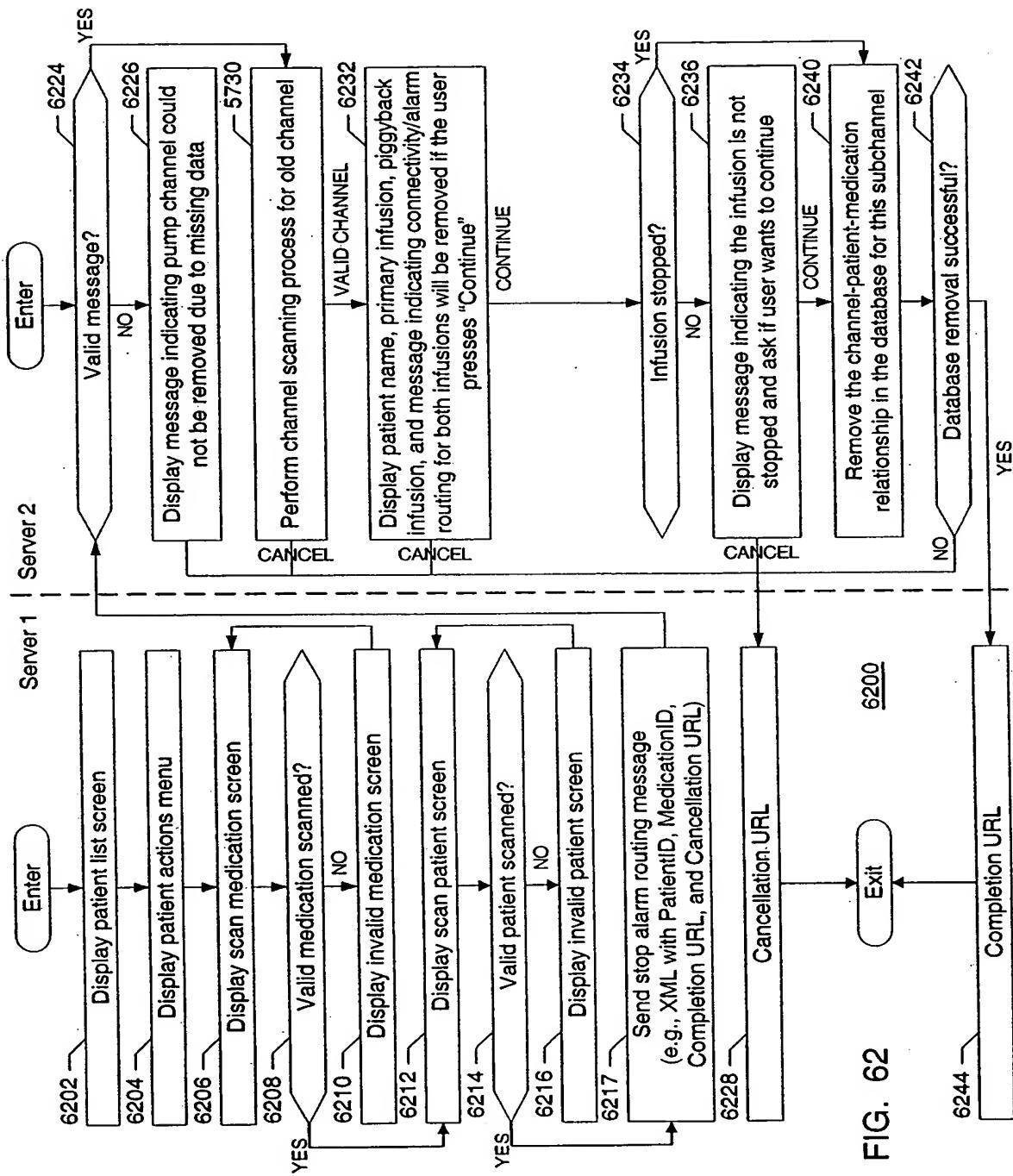


FIG. 62

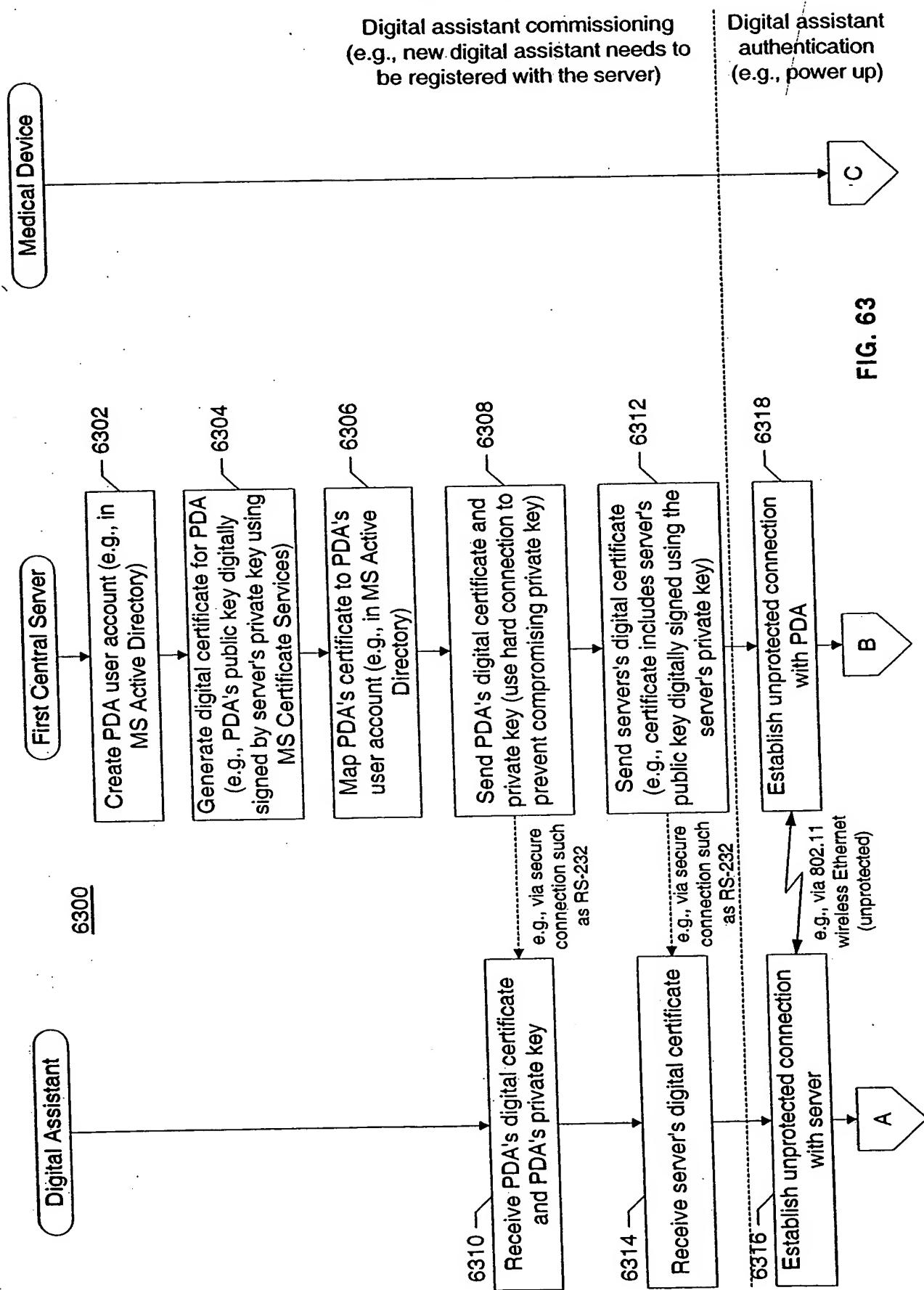
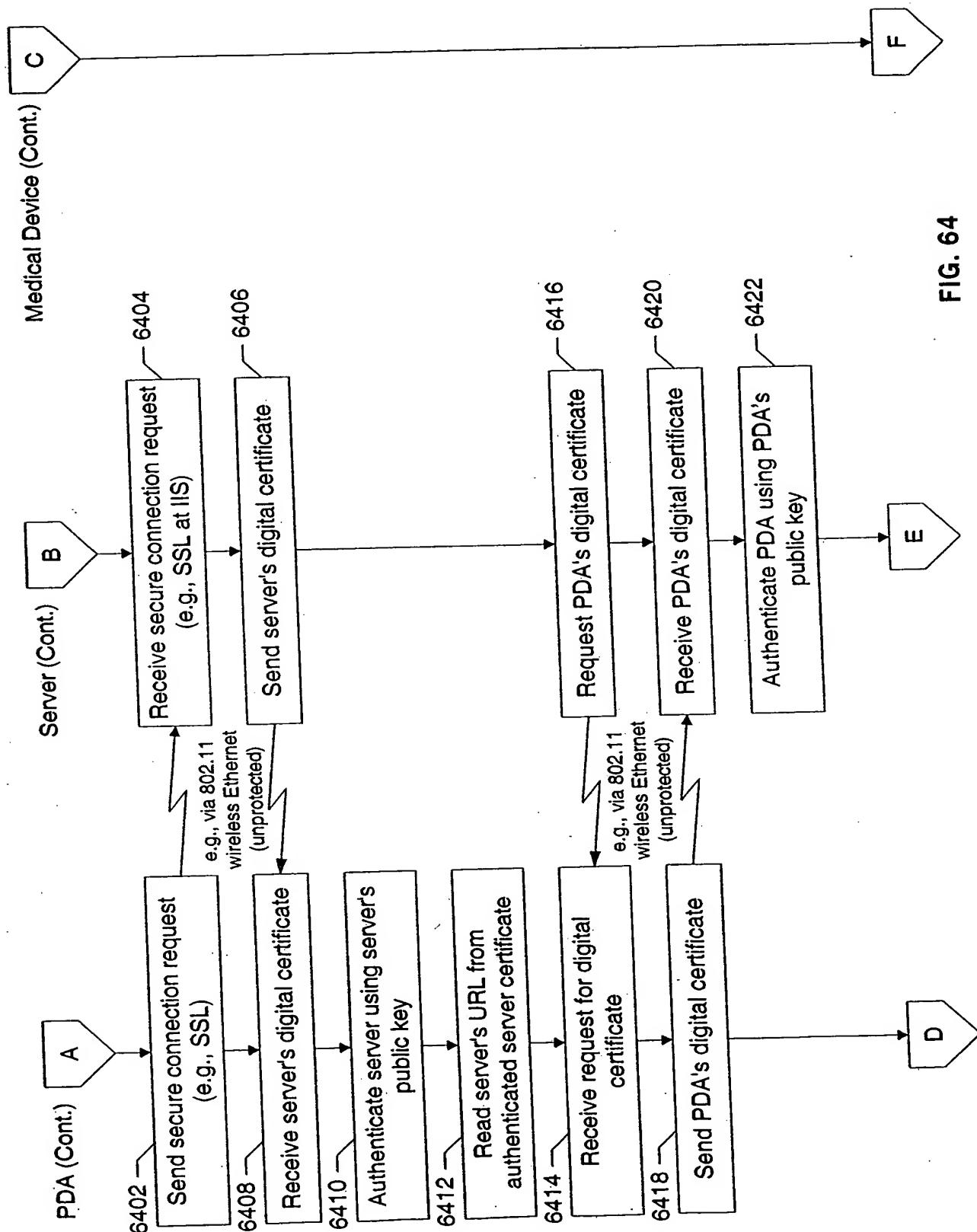
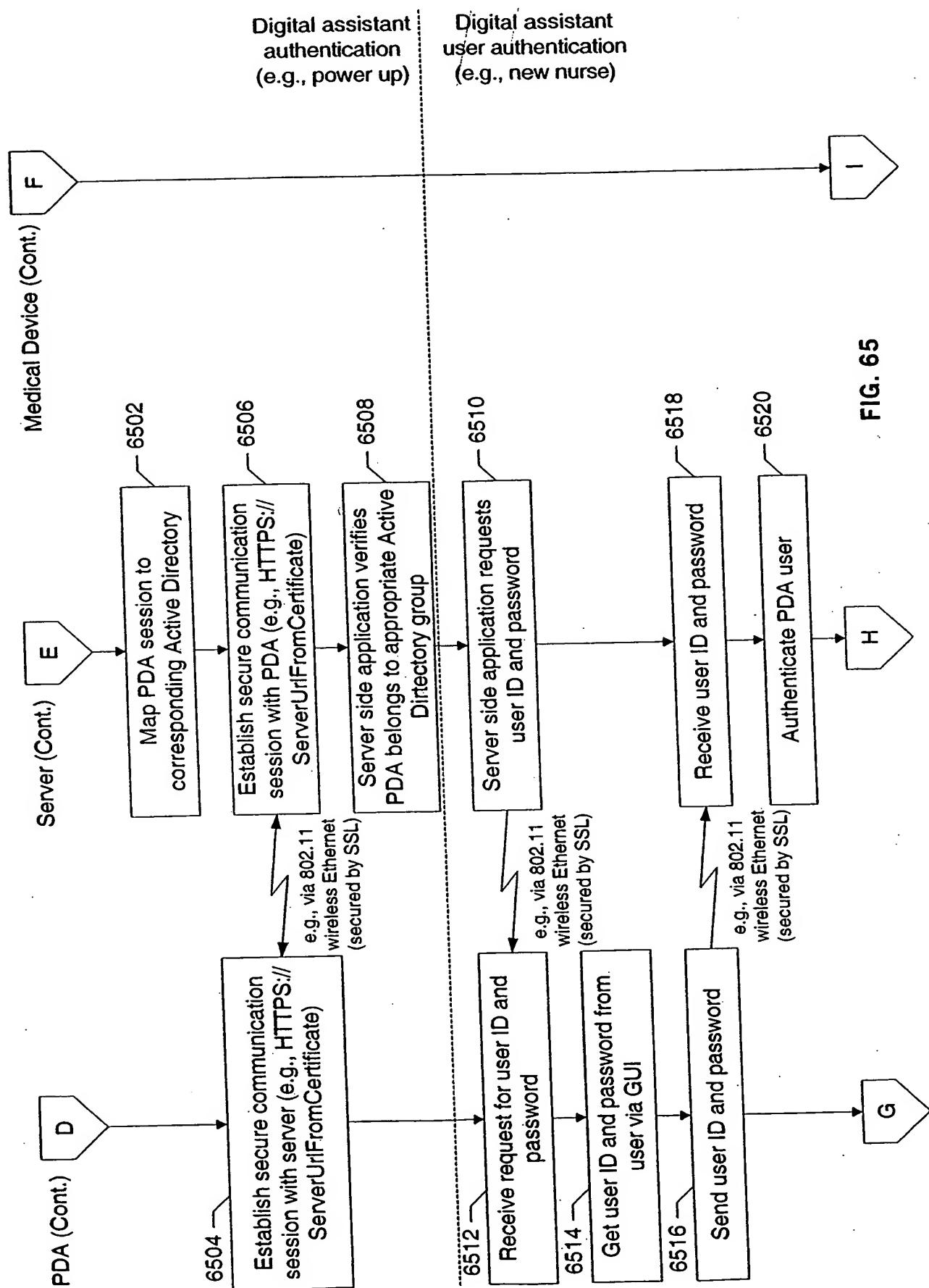


FIG. 63

**Digital assistant  
 authentication  
 (e.g., power up)**



**FIG. 64**



**FIG. 65**

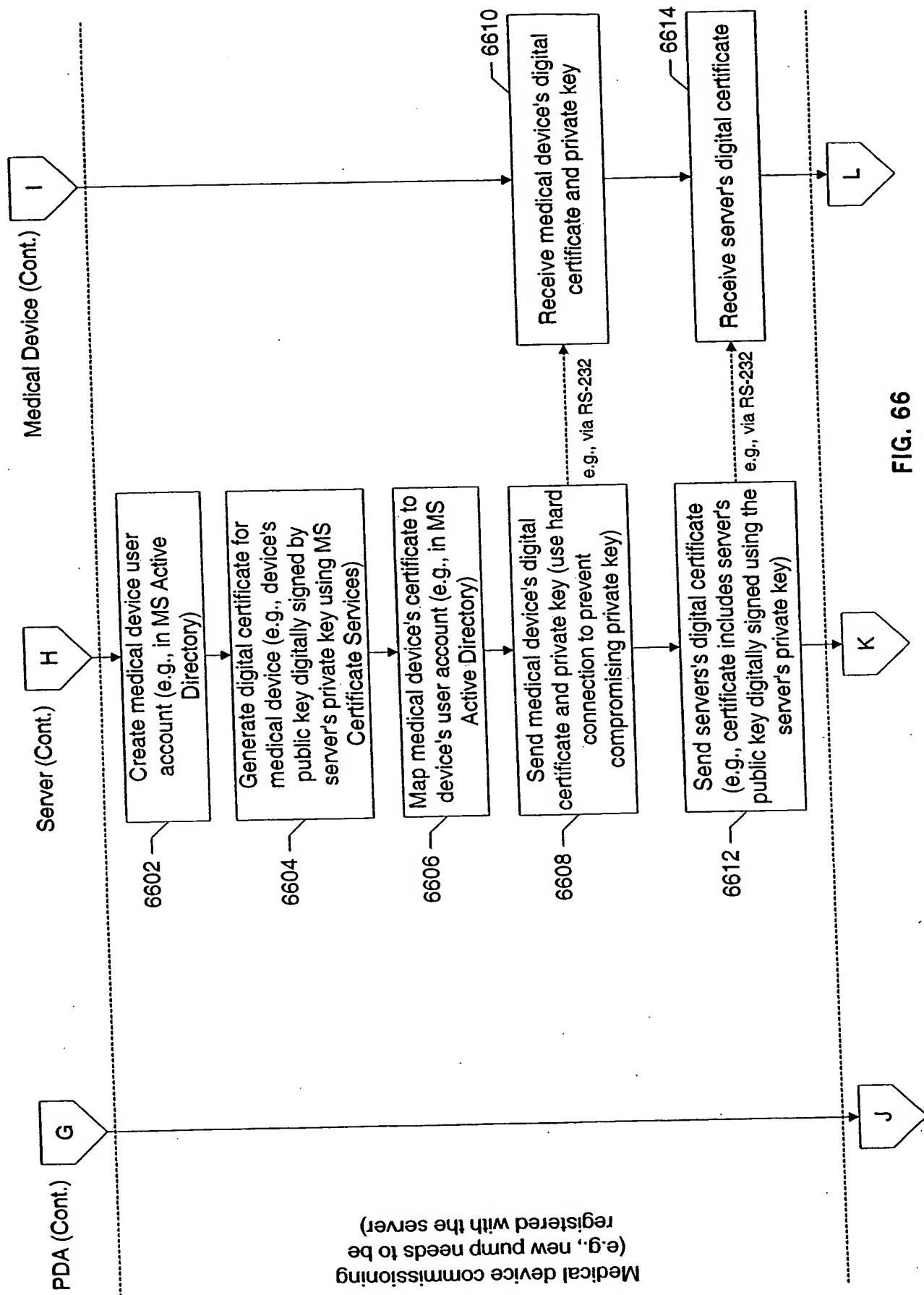
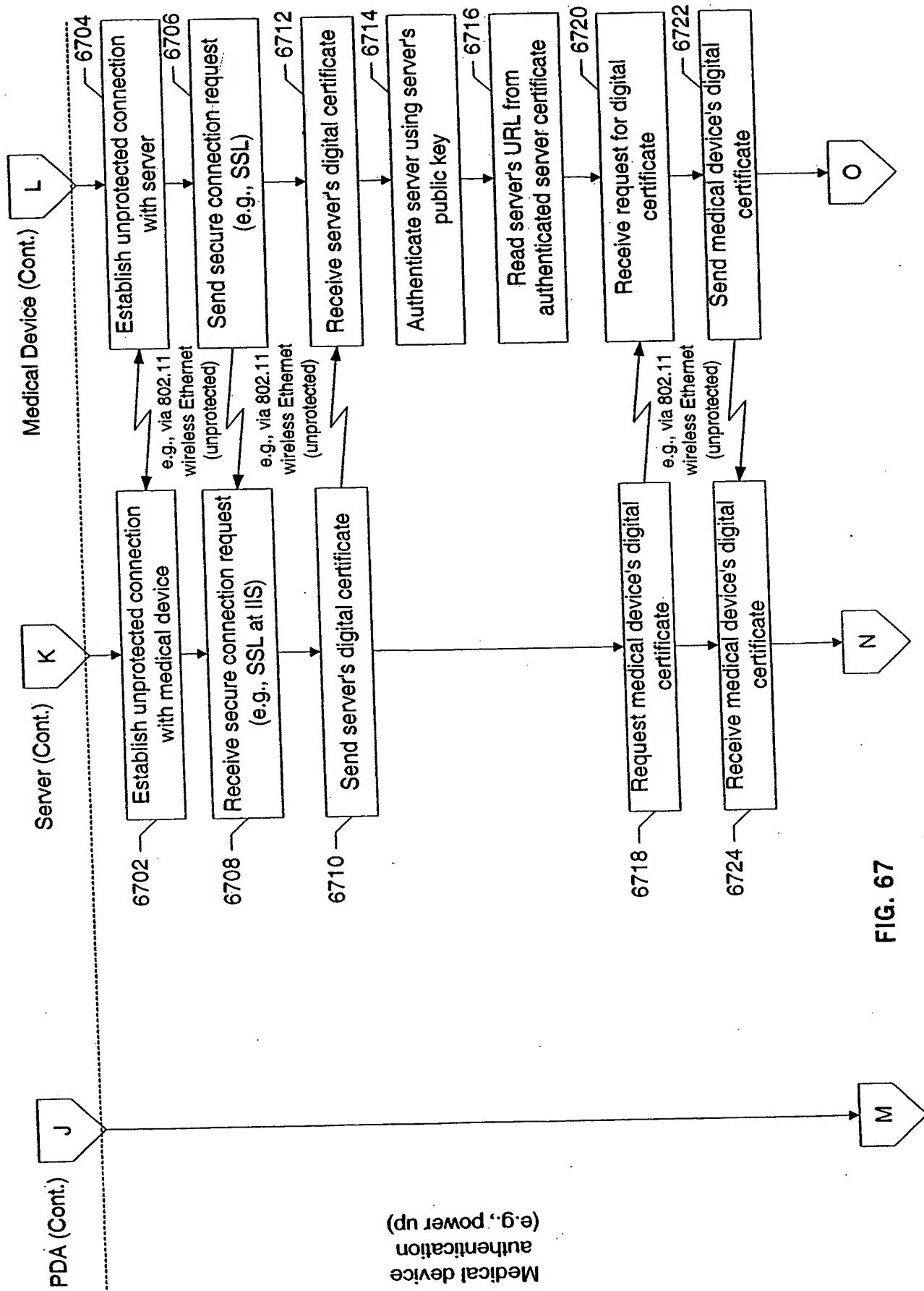
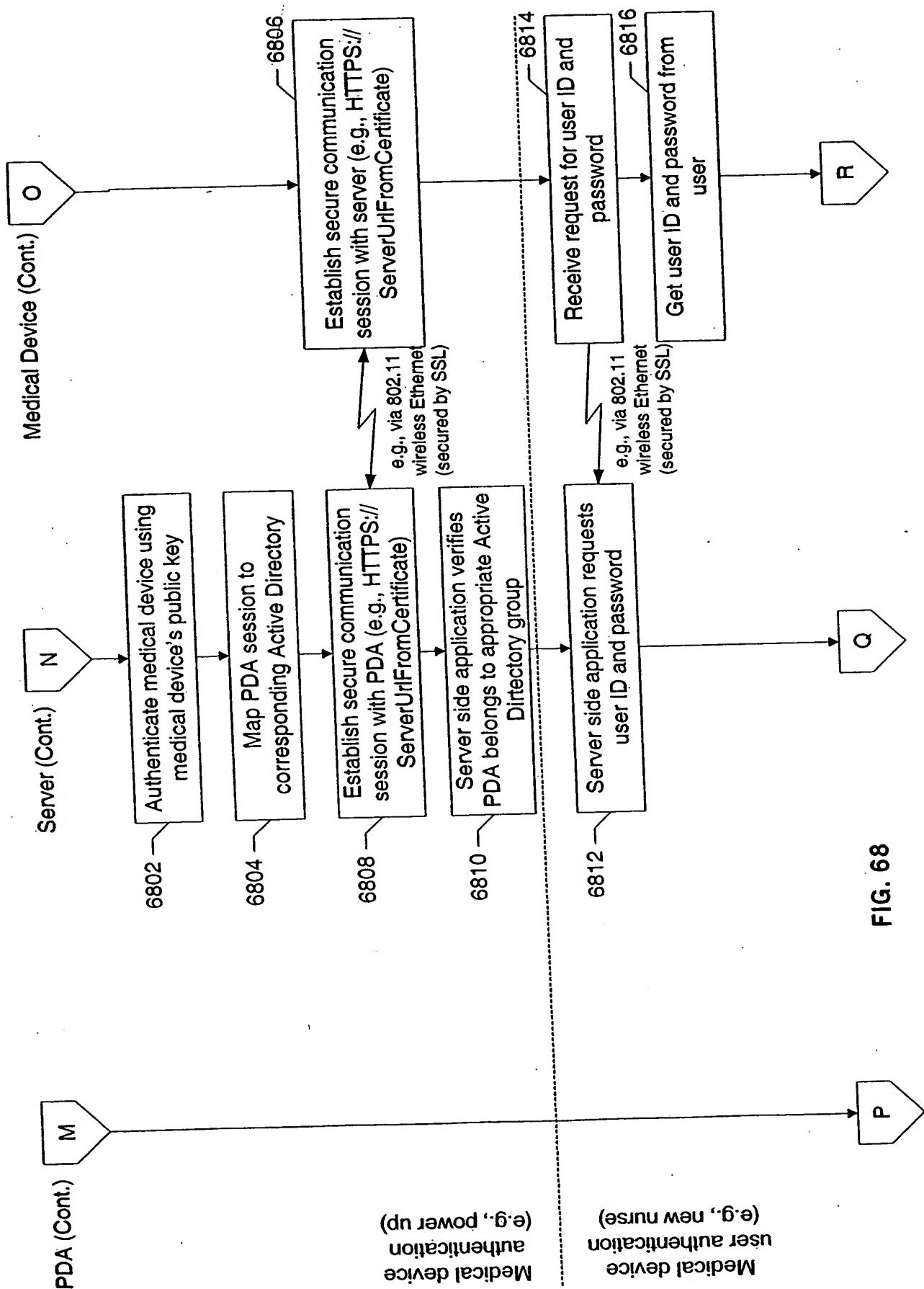


FIG. 66





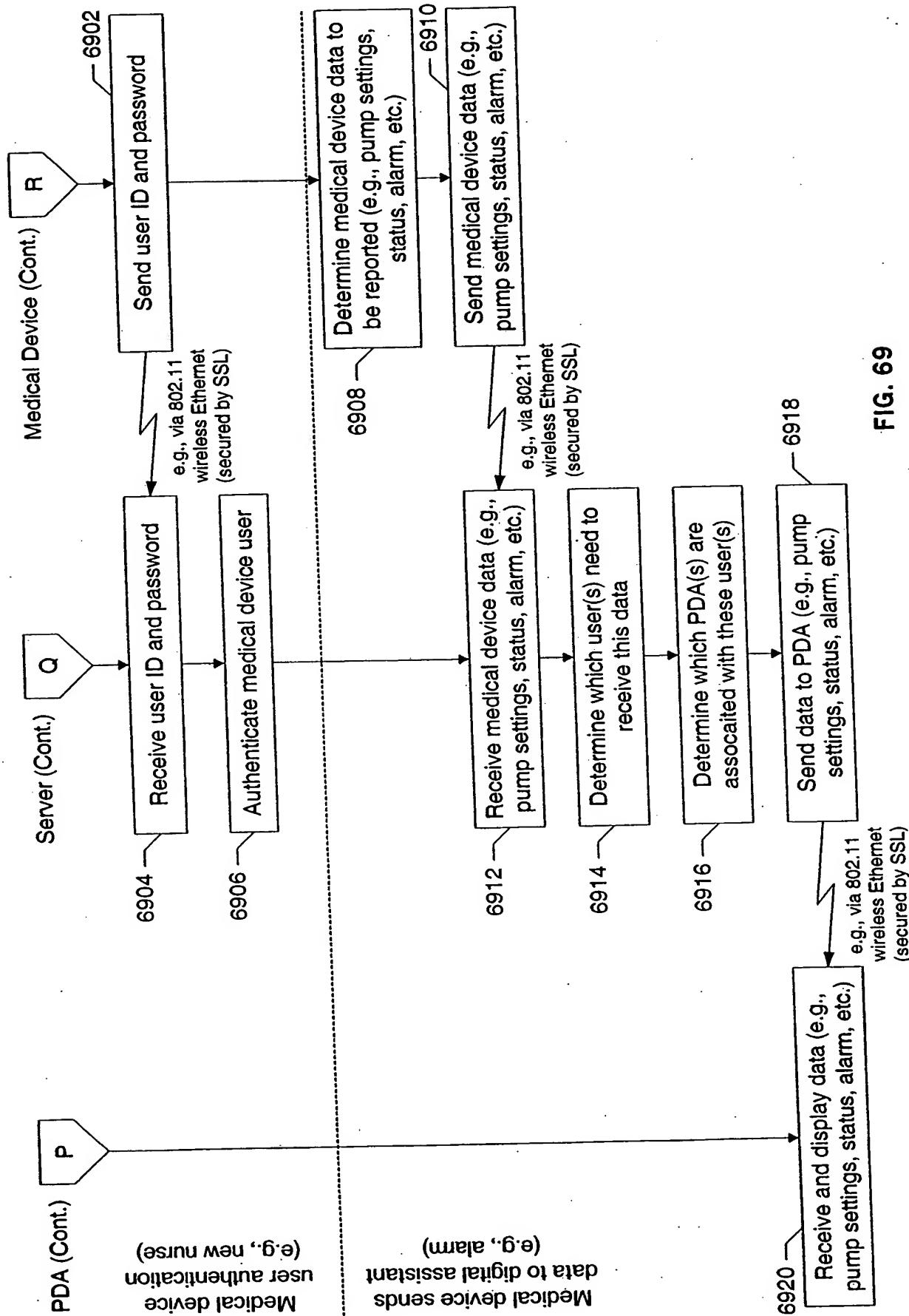


FIG. 69